

# Radio Amateur **CALLBOOK** Magazine

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Known the world over as the CALLBOOK

**RADIO AMATEURS OF THE U.S.A.** (ALL K AND W CALLS)

## IN THIS ISSUE

11,616 NEW LICENSES ISSUED BY FCC SINCE THE SPRING 1963 CALLBOOK  
OVER 29,000 CHANGES IN PREVIOUS LISTINGS  
258,347 LICENSED RADIO AMATEURS

## SUMMER 1963

CURRENT UNTIL THE NEXT  
ISSUE, SEPTEMBER 1963



# Improve your rig with these Collins accessories



**1. 302C-3 Directional Wattmeter**—For fixed or mobile applications. Measures forward and reflected power on 200- and 2000-watt scales accurately (3.4 to 30.0 mc) without calibrating adjustments.

**2. DL-1 Dummy Load**—A 100-watt resistive load for all HF frequencies. Connects permanently in antenna coax line, with in-out relay switching. Provides easy comparison of antenna SWR and nonband interference tune-up. Type N and RCA antenna connectors are provided.

**3. 312B-5 Speaker Console and External PTO**—For use with KWM-2 in fixed station operation. Provides limited separation of receive and transmit frequencies, speaker, directional wattmeter, and switching for functional control system.

**4. 136B-2 Noise Blanker**—For use with KWM-2 in mobile operation. Effectively reduces impulse-type noise in the transceiver. Requires separate antenna resonance at 40 mc.

**5. 312B-3 Speaker**—Contains a 5" x 7" speaker and connecting cable. Styled to match S/Line and KWM-2.

**6. 516F-2 AC Power Supply**—Operates from 115 v ac, 50-60 cps. Provides all voltage for 32S-3 and KWM-2.

**7. MP-1 Mobile Power Supply**—Transistorized inverter powered from a 12 v dc automobile, aircraft or boat storage battery to the voltages required for operating the KWM-1, KWM-2 or KWM-2A.

**8. PM-2 Portable Power Supply**—Compact, lightweight and supplies all voltages needed for KWM-2. Operates from either 115 v ac or 220 v ac at 50-400 cps to give you a completely portable SSB station. An auxiliary speaker is included.

**9. CC-2 Carrying Case**—Specially designed Samsonite Silhouette case for KWM-2/PM-2 or 30L-1. Molded Royalite interior protects equipment against rough handling. Also available in model CC-3 for accessories.

These are just a few of the Collins accessories which can help you improve your rig. There are many more... mounts, microphones and adapters, to mention a few. Ask your authorized Collins distributor to demonstrate the advantages of Collins accessories. A new Collins book, *Amateur Single Sideband*, will be an invaluable addition to any ham's library.

Traveling through Iowa this summer?  
Stop and visit our Cedar Rapids plant.





# Punch Out a Great Signal with this *knight-kit*® 150-Watt AM-CW Transmitter

## MOST "WATTS-PER-DOLLAR"!

- 150 Watt Input, 100 Watt Output 80-10 Meters
- 20 Watts Output on 6 Meters
- Controlled-Carrier Screen Modulation for Max Power
- Stable Built-in VFO with Planetary Drive Tuning
- Clean, Chirpless Keying—No HV at Key Terminals
- Adjustable Pi-Network Output Matches 40-600 Ohm Antenna



## New P-2 SWR/Power Meter Kit

ONLY  
**\$14<sup>95</sup>**

Now! Get the most from your transmitter and antenna! This new "in-line" SWR/power meter measures relative power being fed to antenna and standing wave ratio reflected from it; lets you make your own matching adjustment between line and driven element for maximum RF. Features flexible two unit design (coupler and indicator units) with 4-foot shielded connecting cable; has coax connectors, full KW capacity; can be left in line as constant monitor; reads SWR from 1:1 to 20:1; accuracy better than 10%; negligible insertion loss; for unbalanced 50-72 ohm lines, Amateur and CB; range from 1.8 to 432 mc; has sensitivity adjustments; no AC power or batteries required. Coupler, 2 x 5 x 2 1/2"; indicator, 2 1/4 x 6 1/4 x 3". Complete with all parts and instructions. Shpg. wt., 2 lbs.

83 YX 627 FF. P-2 Kit, only **\$14<sup>95</sup>**

## New T-150 Transmitter Kit

ONLY  
**\$119<sup>95</sup>**

only \$6 monthly  
on Allied's  
Credit Fund Plan

Packed with features to put out a solid signal that really punches thru QRM! 150 watts CW/peak AM input on 80 thru 10 meters, 100 watts on 6 meters. Highlights: Highly stable VFO has illuminated dial and planetary drive; socket for optional switch-selected crystal operation; efficient controlled-carrier screen modulation; adjustable pi-network matches 40 to 600 ohm antennas; buffer stage isolates oscillator from final; parallel 6146's in output stage; silicon diodes for reliable high-voltage and low heat; voltage regulator in B+; single knob bandswitching; TVI suppressed with all leads in and out of case by-passed for RF; switched meter reads buffer, final grid and final plate currents and relative power output; mode switch provides for VFO spotting and tuning without placing a signal on-the-air; clean chirpless keying—no high voltage at key terminals; plus a host of other fine features. With all parts, tubes, plugs, wire, solder and step-by-step instructions and handsome gray satin metal case, 8 1/2 x 17 x 10 1/2". Less mike, key, crystals. For 110-125 v. 60 cycle AC. 28 lbs.

83 YU 403 FF. T-150 Transmitter Kit, only.... **\$119<sup>95</sup>**

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OF THE LEADING HAM JOURNALS

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TODAY**



# RADIO AMATEUR CALLBOOK

## MAGAZINE

known the world over as the "CALLBOOK"

### SUMMER 1963

VOLUME 41 NUMBER 2

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### RADIO AMATEURS OF THE U.S.A.

ALL K AND W CALLS

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## New standard of performance for AM, CW, SSB reception

- Band-pass filter front end—equivalent of four tuned circuits preceding 1st mixer.
- Crystal-controlled high frequency oscillator.
- 5 steps of selectivity plus Hallicrafters' exclusive upper/lower sideband selection.
- Linear CTO, direct reading in kc.



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RECEIVER

The experienced amateur will immediately recognize in the SX-115 a first rate engineering triumph that creates an *entirely new class* of deluxe receiver.

**Frequency coverage:** Nine 500-kc segments covering 3.5–4.0 mc.; 7.0–7.5 mc.; 14.0–14.5 mc.; 21–21.5 mc.; 28.0–30.0 mc.; (4 segments); and WWV.

**Additional features:** Highest order of

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# A. R. R. L. COUNTRIES LIST

The ARRL Postwar Countries List is the official standard used in connection with the DX Century Club. To qualify for the DX Century Club Award, an applicant must submit confirmations from at least 100 different countries contacted after November 15, 1945, in accordance with the Postwar DXCC Rules. Copies of the DXCC Rules will be furnished by ARRL on request.

AC3	Sikkim	KM6	Midway Islands	VP8	(See CE9)
AC4	Tibet	KP4	Puerto Rico	VP8	Falkland Islands
ACS	Bhutan	KP6	Palmyra Group, Jarvis Island	VP8, LU-Z	South Georgia Islands
AP	East Pakistan	KR6	Ryukyu Islands	VP8, LU-Z	South Orkney Islands
AP	West Pakistan	KS4B	Serrana Bank & Roncador Cay	VP8, LU-Z	South Sandwich Islands
BV, (C3)	Formosa	KS4	Swan Islands	VP8, LU-Z, CE9	South Shetland Islands
BY, (C)	China	KS8	American Samoa	VP9	Bermuda Islands
C9	Manchuria	KV4	Virgin Islands	VQ1	Zanzibar
CE	Chile	KW6	Wake Island	VQ2	Northern Rhodesia
CE9, KC4, LU-Z, VKφ, VP8, ZL5	Antarctica	KX6	Marshall Islands	VQ3	(See 5H3)
CE9	(See VP8)	KZ5	Canal Zone	VQ4	Kenya
CE9A	Easter Island	LA	Jan Mayen	VQ5	(See 5X5)
CE9Z	Juan Fernandez Archipelago	LA	Norway	VQ6	British Somaliland
CM, CO	Cuba	LA	Svalbard	VQ8	Cargadas Carajos
CN2	Tangiers	LU	Argentina	VQ8	Chagos Islands
CN2, CN8, CN9	Morocco	LU-Z	(See CE9)	VQ8	Mauritius
CP	Bolivia	LX	Luxembourg	VQ8	Rodriguez Island
CR4	Cape Verde Islands	LZ	Bulgaria	VQ9	Aldabra
CR5	Portuguese Guinea	M1	San Marino	VQ9	Seychelles
CR5	Principe, Sao Thome	MP4	Bahrain	VR1	British Phoenix Islands & Ocean Island
CR6	Angola	MP4	Qatar	VR2	Fiji Islands
CR7	Mozambique	MP4M, VS9	Sultanate of Muscat & Oman	VR3	Fanning & Christmas Islands
CR8	Damao, Diu	MP4	Trucial Oman	VR4	Solomon Islands
CR8	Goa	OA	Peru	VR5	Tonga Islands
CR8, CRφ	Portuguese Timor	OD5	Lebanon	VR6	Pitcairn Island
CR9	Macao	OE	Austria	VS1	Singapore
CT1	Portugal	OH	Finland	VS4	Sarawak
CT2	Azores	OHφ	Aland Islands	VS5	Brunei
CT3	Madeira Islands	OK	Czechoslovakia	VS6	Hong Kong
CX	Uruguay	ON4	Belgium	VS9	Aden & Socotra
DJ, DL, DM	Germany	OX, KG1	Greenland	VS9K	Kamran Is.
DU	Philippine Islands	OY	Faeroes	VS9	Maldives Islands
EA	Spain	OZ	Denmark	VS9	(See MP4)
EA6	Balearic Islands	PAφ, P11	Netherlands	VU	Andaman and Nicobar Islands
EA8	Canary Islands	PJ	Netherlands Antilles	VU	India
EA9	Iini	PJ2M	Sint Maarten	VU	Laccadive Islands
EA9	Rio de Oro	PK1,2,3	Java	XE, XF	Mexico
EA9	Spanish Morocco	PK4	Sumatra	XE4	Revilla Gigedo
EAφ	Spanish Guinea	PK5	Netherlands Borneo	XT	Voltaic Rep.
EL	Republic of Ireland	PK6	Celebes & Molucca Is.	XW8	Laos
EP	Liberia	PX	Andorra	XZ2	Burma
ET2	Iran	PY	Brazil	YA	Afghanistan
ET3	Eritrea	PYφ	Fernando de Noronha	Y1	Iraq
F	Ethiopia	PYφ	Trindade & Martin Vaz Islands	Y1	(See FU8)
FA	France	PZ1	Surinam	YK	Syria
FB8	Algeria	SL, SM	Sweden	YN, YNφ	Nicaragua
FB8	Amsterdam & St. Paul Islands	SP	Poland	YO	Roumania
FB8	Comoro Islands	ST2	Sudan	YS	Salvador
FB8	Kerguelen Islands	ST	Egypt	YU	Yugoslavia
FB8	Tromelin Island	SV	Crete	YV	Venezuela
FC (Unofficial)	Corsica	SV	Dodecanese	YVφ	Aves Island
FF8	French West Africa	TA	Greece	ZA	Albania
FG7	Guadeloupe	TF	Turkey	ZB1	Malta
FL8	French Indo-China	TG	Iceland	ZB2	Gibraltar
FK8	New Caledonia	TI	Guatemala	ZC4	(See 5B4)
FL8	French Somaliland	TI9	Costa Rica	ZC5	British North Borneo
FM7	Martinique	TI9	Cocos Island	ZC6	Palestine
FN	French India	TI9	Cameroons	ZD1	(See 9L1)
FO8	Clipperton Island	TL	Central African Rep.	ZD3	Gambia
FO8	French Oceania	TN	Congo Rep.	ZD4	(See 9G1)
FO8	St. Pierre & Miquelon Islands	TR	Gabon Rep.	ZD4	Gold Coast, Togoland
FR7	French Equatorial Africa	TT	Chad Rep.	ZD6	Nyasaland
FS7	Reunion Island	TU	Ivory Coast	ZD7	St. Helena
FU8, YJ1	Saint Martin	TY	Dahomey Rep.	ZD8	Ascension Island
FW8	New Hebrides	TZ	Mali Rep.	ZD9	Tristan da Cunha & Gough Island
FY7	Wallis & Futuna Islands	UA1-8, UN1	European Russian	ZE	Southern Rhodesia
FY7	French Guiana & Iini	UA1	Socialist Federated Soviet Republic	ZK1	Cook Islands
G	England	UA2	Franz Josef Land	ZK1	Manihiki Islands
GC	Channel Islands	UA9, φ	Kaliningradsk	ZK2	Niue
GD	Isle of Man	UB5, UT5	Asiatic Russian S.F.S.R.	ZL	Auckland & Campbell Islands
GI	Northern Ireland	UC2	White Russian Soviet Socialist Republic	ZL	Chatham Islands
GM	Scotland	UD6	Azerbaijan	ZL	Kermadec Islands
GW	Wales	UF6	Georgia	ZL	New Zealand
HA	Hungary	UG6	Armenia	ZL5	(See CE9)
HB	Switzerland	UH8	Turkmen	ZM6	Western Samoa
HC	Ecuador	UJ8	Uzbek	ZM7	Tokelau
HCB	Galapagos Islands	UL7	Tadzhik	ZP	Paraguay
HE	Liechtenstein	UM8	Kazakh	ZS1, 2, 4, 5, 6	South Africa
HH	Haiti	UN1	Kirghiz	ZS2	Prince Edward & Marion Islands
HI	Dominican Republic	UO5	Karelo-Finnish Rep.	ZS3	Southwest Africa
HK	Colombia	UP2	Moldavia	ZS7	Swaziland
HKφ	Bajo Nuevo	UQ2	Lithuania	ZS8	Basutoland
HKφ	Malpelo Island	UR2	Latvia	ZS9	Bechuanaland
HKφ	San Andres and Providencia	VE, VO	Estonia	3A	Monaco
HL, HM	Korea	VK	Canada	3V8	Tunisia
HP	Panama	VK	Australia (including Tasmania)	3W8, XV5	Vietnam
HR	Honduras	VK4	Lord Howe Island	4S7	Ceylon
HS	Thailand	VK9, ZC3	Willis Islands	4W1	Yemen
HV	Vatican City	VK9	Christmas Island	4X4	Israel
HZ	Saudi Arabia	VK9	Cocos Islands	5A	Libya
II, IT1	Italy	VK9	Nauru Island	5B4	Cyprus
IL	Trieste	VK9	Norfolk Island	5H3	Tanganyika
IS1	Italian Somaliland	VK9	Papua Territory	5N2, ZD2	Nigeria
JA, KA	Japan	VKφ	Territory of New Guinea	5R8	Malagasy Republic
JT1	Mongolia	VKφ	(See CE9)	5T	Mauritania
JY	Jordan	VKφ	Heard Island	5U7	Niger Republic
JZφ	Netherlands New Guinea	VP1	Macquarie Island	5V	Togo Republic
K, W	United States of America	VP2	British Honduras	5X5	Uganda
KAφ, KG61	Bonin & Volcano Islands	VP2	Antigua, Barbuda	6O1,2	Somali Republic
KB6	Baker, Howland & American Phoenix Islands	VP2	British Virgin Islands	6W8, FF8	Senegal Republic
KC4	(See CE9)	VP2	Dominica	7G1	Republic of Guinea
KC4	Navassa Island	VP2	Grenada & Dependencies	9G1, ZD4	Ghana
KC6	Eastern Caroline Islands	VP2	Montserrat	9K2	Kuwait
KC6	Western Caroline Islands	VP2	St. Kitts, Nevis	9K3	Kuwait/Saudi Arabia Neutral Zone
KG1	(See OX)	VP2	St. Lucia	9L1	Sierra Leone
KG4	Guantanamo Bay	VP2	St. Vincent & Dependencies	9M2	Malaya
KG6	Marcus Island	VP3	British Guiana	9N1	Nepal
KG6	Mariana Islands	VP4	Trinidad & Tobago	9Q5, OQ5, φ	Republic of Congo
KG6	Guam	VP5	Cayman Islands	9S4	Sar
KG61	(See KAφ)	VP5	Jamaica	9U5	Burundi
KH6	Hawaiian Islands	VP5	Turks & Caicos Islands	9U5	Rwanda
KH8	Kure Island	VP6	Barbados	9U5	Ruanda-Urundi
KJ6	Johnston Island	VP7	Bahama Islands		Cambodia
KL6	Alaska				

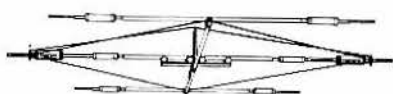


# Mosley

## ANTENNAS & TOWERS

*Feature* \* Unmatched Construction  
\* Unparalleled Performance

### 10 15 20 & 40 Meters



TA-3340

Mosley TA-31 is an excellent beginning to your antenna system. Operates on 10, 15 and 20 meters, as a rotatable dipole, giving excellent performance over full band width.

Mosley TA-31 Rated to 1 KW Amateur Net \$ 27.14  
Mosley TA-31 Jr. Rated to 300 Watts. Amateur Net \$ 20.75

Mosley TA-31/32 Conversion Kit adds a second element to Mosley TA-31 converting to Mosley TA-32, 10, 15 and 20 meter beam. Contains reflector element, 7' boom, and all necessary hardware.

Mosley TA-31/32 Rated to 1 KW. Amateur Net \$44.52  
Mosley TA-31/32 Jr. Rated to 300 Watts. Amateur Net \$ 30.35  
Mosley TA-32 Rated to 1 KW. Amateur Net \$ 72.98  
Mosley TA-32 Jr. Rated to 300 Watts. Amateur Net \$51.98

Mosley TA-32/33 Conversion Kit adds a third element to the Mosley TA-32 converting to the "World Famous" Mosley TA-33, 10, 15 and 20 meter beam.

Mosley TA-32/33 Rated to 1 KW. Amateur Net \$ 30.86  
Mosley TA-32/33 Jr. Rated to 300 Watts. Amateur Net \$ 26.37  
Mosley TA-33 Rated to 1 KW. Amateur Net \$104.75  
Mosley TA-33 Jr. Rated to 300 Watts. Amateur Net \$ 72.98

Mosley TA-40K adds "Forty Meters" to any of the models rated to 1KW listed above. Contains radiator traps and all necessary hardware. Mosley TA-40K and Mosley TA-33 can be ordered as a complete antenna package, Mosley TA-3340. When added, Mosley TA-40K does not effect the characteristics of the primary antenna and operates as a 1/2 wave rotatable dipole on 40 meters. Rated to 1KW.

Mosley TA-40K 40 meter adapter Amateur Net \$ 40.75  
Mosley TA-3340 Amateur Net \$ 147.35

## Mosley TOWERMASTER

Mosley, the top name in beam manufacture, now has a complete line of quality built towers to fit every need, application and requirements.

### Features

- Available in 10 and 20 foot sections with hot dipped galvanized, or epoxy resin finish.
- Geared crank-up winch and safety lock.
- Extra reinforcing spreader.
- Heavy steel winch frame.
- Predrilled rotor mounting plate with series 300, will accept CDR type rotor - Series 400, 500, 650, 700, 750 will accept either CDR or Prop-pitch types.
- 2 inch I.D. mast sleeves.
- All tubular leg members of high strength mechanical steel tubing.
- Heavy duty steel hinged base plate.
- Welded section stops.
- Heavy duty safety clips.
- Metal ball bearing pulley sheaves.
- Galvanized aircraft type raising cables.
- Heavy duty steel channel bracing members.
- Low friction section guides.
- Vertical guy attachment loops.

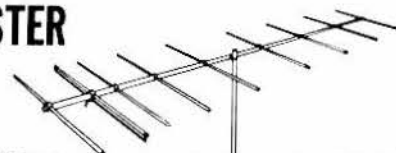


## Mosley Electronics, Inc.

4610 N. LINDBERGH BLVD.,

BRIDGETON, MISSOURI

### NEW! SCOTCH-MASTER 2 & 6 Meter Antennas



MOSLEY Model A-92-S ..... Amateur Net \$16.40

New Mosley SCOTCH-MASTER two meter beam is a nine element antenna. May be mounted vertically or horizontally, will handle maximum legal power, amplitude modulated or 2,000 watts P.E.P. SSB. Mounting bracket fits masts up to 1 1/2" OD. Antenna is matched for 300 ohm balanced line. Boom is of sturdy medium weight wall 1 1/4" OD aluminum tubing to achieve maximum strength with minimum weight and wind loading characteristics. Stacked arrays feature 300 or 75 ohm balanced feed.

SPECIFICATIONS AND PERFORMANCE DATA: Forward gain, 14 Db. Front-to-back, 20 Db. SWR, 1.5 to 1 or less at resonant frequencies. Maximum element length, 41 inches. Boom length, 12 feet. Turning radius, 6.5 feet. Assembled weight, 4 pounds. Maximum wind surface area, 1.25 square feet. Wind load, 25 pounds. Antenna is shipped in kit form.

MOSLEY Model A-76-S ..... Amateur Net \$35.10

The Mosley SCOTCH-MASTER six meter beam has seven elements. Provides maximum forward gain and excellent directivity. SCOTCH-MASTER will handle the full legal power, amplitude modulated. Mounting bracket fits up to 1 1/2 inch OD mast. Antenna is "Gamma" matched for 52 ohm unbalanced line. Boom is of heavy gauge 1 1/4" OD aluminum. Easily rotated with TV rotor and can be mounted vertically or horizontally.

SPECIFICATIONS AND PERFORMANCE DATA: Forward gain, 12 Db. Front-to-back, 20 Db. Boom length, 24 feet. Turning radius, 13 feet. Assembled weight, 12.5 pounds. Maximum wind surface area, 2.5 square feet. Wind load, 51 pounds. Antenna is shipped in kit form, complete with detailed instructions.

MOSLEY Model A-56-S ..... Amateur Net \$28.16

The New Mosley SCOTCH-MASTER six meter beam features five elements, maximum forward gain and excellent directivity. This gamma matched beam will handle the full legal power amplitude modulated. Can be mounted vertically or horizontally. Feed with 52 or 75 ohm line.

SPECIFICATIONS AND PERFORMANCE DATA: Forward gain, 10 Db. Front-to-back, 20 Db. or better. SWR, 1.5 to 1 or less at resonant frequencies. Maximum element length, 118 inches. Boom length, 12 feet. Turning radius, 7 feet 8 3/4 inches. Assembled weight, 6.5 pounds. Wind load, 32 pounds horizontally, 56 pounds vertically. Antenna is shipped in kit form, complete with detailed instructions.

### .. Mosley SCOTCH-MASTER Stacking Kits ..

MOSLEY Model A-92-S-SK1 ..... Amateur Net \$3.15

A kit for stacking two horizontally polarized A-92 SCOTCH-MASTER beams, one above the other. Comes complete with matching transformer, insulator, complete instructions and phasing line. Feed point impedance - 300 ohm balanced line. This stacked array will attain 3 Db additional gain over single horizontally mounted beam.

MOSLEY Model A-92-S-SK2H ..... Amateur Net \$44.35

A kit for stacking four horizontally polarized A-92 SCOTCH-MASTER beams, two over two. Complete with support members, mounting plates, phasing line, insulators, hardware and instructions. Feed point impedance - 75 ohm balanced line. This stacked array will attain 6 Db additional gain over a single horizontally mounted beam.

MOSLEY Model A-92-S-SK2V ..... Amateur Net \$44.35

A kit for stacking four A-92 SCOTCH-MASTER beams, two over two, in the vertical plane. Comes complete with support members, mounting plates, insulators, phasing line, hardware and instructions. Feed point impedance - 75 ohm balanced line. This stacked array will attain 6 Db additional gain over a single vertically mounted beam.



# INTERNATIONAL RADIO AMATEUR PREFIXES

The following prefixes are listed in alphabetical order for convenience in locating the country when DX calls are heard.

AC3	SIKKIM	KG4	GUANTANAMO BAY, CUBA	VP4	TRINIDAD & TOBAGO IS.
AC4	TIBET	KG6	MARIANAS ISLANDS (Guam)	VP5	CAYMAN, TURKS & CAICOS IS.
AC5	BHUTAN	KG6I	VOLCANO ISLANDS	VP6	BARBADOS
AP	PAKISTAN	KG6S	SAIPAN ISLAND	VP7	BAHAMA ISLANDS
BV	FORMOSA	KG6T	TINIAN ISLAND	VP8	FALKLAND ISLANDS
BY, (C)	CHINA	KH6	HAWAIIAN ISLANDS		South Georgia, South Orkney, South
C9	MANCHURIA	KJ6	JOHNSTON ISLAND		Sandwich and South Shetland Is.
CE	CHILE	KL7	ALASKA	VP9	BERMUDA ISLANDS
CEpA	EASTER ISLAND	KM6	MIDWAY ISLAND	VQ1	ZANZIBAR
CEpZ	JUAN FERNANDEZ IS.	KP4	PUERTO RICO	VQ2	NORTHERN RHODESIA
CM-CO	CUBA	KP6	PALMYRA & JARVIS ISLANDS	VQ4	KENYA
CN	MOROCCO	KR6, KR8	RYUKYU IS. (Okinawa)	VQ8	CHAGOS, MAURITIUS & RODRIGUEZ IS.
CN9	MOROCCO (Zona Norte)	KS4	SWAN ISLAND	VQ9	SEYCHELLES
CP	BOLIVIA	KS4B	SERRANA BANK & RONCADOR CAY	VR1	GILBERT, ELLICE & OCEAN ISLANDS
CR4	CAPE VERDE ISLANDS	KS6	U. S. SAMOA	VR2	FIJI ISLANDS
CR5	PORTUGUESE GUINEA	KV4	VIRGIN ISLANDS	VR3	LINE ISLANDS
CR6	ANGOLA	KW6	WAKE ISLAND	VR4	SOLOMON ISLANDS
CR7	MOZAMBIQUE	KX6	MARSHALL ISLANDS	VR5	TONGA (Friendly) ISLAND
CR8	GOA (Portuguese India)	KZ5	CANAL ZONE	VR6	PITCAIRN ISLAND
CR8	TIMOR ISLAND (PORT.)	LA	NORWAY, SVALBARD, JAN MAYEN IS.	VS1	SINGAPORE
CR9	MACAO	LU	ARGENTINA	VS4	SARAWAK
CT1	PORTUGAL	LX	LUXEMBOURG	VS5	BRUNEI
CT2	AZORES ISLANDS	LZ	BULGARIA	VS6	HONG KONG
CT3	MADEIRA ISLANDS	MP4	BAHRAIN IS., DAS IS., MUSCAT & OMAN, QATAR, TRUCIAL STATES	VS9	ADEN, SOCOTRA, KAMARAN & MALDIVE IS.
CX	URUGUAY	OA	PERU	VU	INDIA
DJ, DL	WEST GERMAN FEDERAL REP.	OD5	LEBANON	VU4	LACCADIVE ISLANDS
DM	EAST GERMAN DEMOCRATIC REP.	OE	AUSTRIA	VU5	ANDAMAN & NICOBAR IS.
DU	PHILIPPINE ISLANDS	OH	FINLAND	W	UNITED STATES
EA	SPAIN	OHp	ALAND ISLANDS	XE	MEXICO
EA6	BALEARIC ISLANDS	OK	CZECHOSLOVAKIA	XE4	REVILLA GIGEDO IS.
EA8	CANARY ISLANDS	ON	BELGIUM	XT2	Rep. of UPPER VOLTA
EA9	SPANISH SAHARA, IFNI, RIO DE ORO	OX	GREENLAND	XU	CAMBODIA
EAp	SPANISH GUINEA, RIO MUNI	OY	FAEROES IS.	XW8	LAOS
EI	IRELAND	OZ	DENMARK	XZ	BURMA
EL	LIBERIA	PA, PI	NETHERLANDS	YA	AFGHANISTAN
EP, EQ	IRAN	PJ	NETHERLANDS ANTILLES	YI	IRAQ
ET3	ETHIOPIA	PJ2M	SINT MAARTEN	YJ	NEW HEBRIDES
F	FRANCE	PK	INDONESIA	YK	SYRIA
FA	ALGERIA	PX	ANDORRA	YN	NICARAGUA
FB8	AUSTRAL and ANTARCTIC FRENCH LANDS, Amsterdam, Crozet, St. Paul, Kerguelen Is.	PY	BRAZIL	YO	RUMANIA
FC	CORSICA	PYp	TRINIDADE & MARTIN VAZ IS. & FERNANDO DE NORONHA IS.	YS	EL SALVADOR
FES	CAMEROUN	PZ	SURINAM (Netherlands Guiana)	YT, YU	YUGOSLAVIA
FG7	GUADELOUPE	SL, SM	SWEDEN	YV	VENEZUELA
FH8	COMORO ISLANDS	SP	POLAND	ZA	ALBANIA
FK8	NEW CALEDONIA	ST	SUDAN	ZB1	MALTA
FL8	FRENCH SOMALILAND	SU	EGYPT	ZB2	GIBRALTAR
FM7	MARTINIQUE	SV	CRETE & GREECE	ZC5	BRITISH NORTH BORNEO
F08	FRENCH OCEANIA, CLIPPERTON IS.	SV5	DODECANESE ISLANDS	ZD3	GAMBIA
FP8	MIQUELON & ST. PIERRE IS.	TA	TURKEY	ZD6	NYASALAND
FR7	REUNION ISLAND	TF	ICELAND	ZD7	SAINT HELENA
FS7	SAINT MARTIN	TG	GUATEMALA	ZD8	ASCENSION ISLAND
FU8	NEW HEBRIDES	TI	COSTA RICA	ZD9	TRISTAN DA CUNHA & GOUGH ISLANDS
FW8	WALLIS & FUTUNA ISLANDS	Ti9	COCOS ISLAND	ZE	SOUTHERN RHODESIA
FY7	FRENCH GUIANA	TL8	CENTRAL AFRICAN REP.	ZK1	COOK ISLANDS
G	ENGLAND	TN8	REPUBLIC OF CONGO	ZK2	NIUE
GC	CHANNEL ISLANDS	TR8	GABON REPUBLIC	ZL	NEW ZEALAND
GD	ISLE OF MAN	TT8	TCHAD REPUBLIC	ZL1	KERMADEC
GI	NORTHERN IRELAND	TU2	IVORY COAST	ZP	PARAGUAY
GM	SCOTLAND	TY2	DAHOMEY REPUBLIC	ZS	Rep. of SOUTH AFRICA
GW	WALES	TZ	MALI REPUBLIC	ZS2	PRINCE EDWARD & MARION IS.
HA	HUNGARY	UA1.3-4-6	EUROPEAN RUSSIAN SOCIALIST FEDERATED SOVIET REPUBLIC	ZS3	SOUTHWEST AFRICA
HB	SWITZERLAND	UA9-p	ASIATIC RUSSIAN S. F. S. R.	ZS7	SWAZILAND
HC	ECUADOR	UB5	UKRAINE	ZS8	BASUTOLAND
HC8	GALAPAGOS ISLANDS	UC2	WHITE RUSSIAN S.S.R.	ZS9	BECHUANALAND
HE9L	LIECHTENSTEIN	UD6	AZERBAIJAN	3A2	MONACO
HH	HAITI	UF6	GEORGIA	3V8	TUNISIA
HI	DOMINICAN REPUBLIC	UG6	ARMENIA	3W8	VIETNAM
HK	COLOMBIA	UH8	TURKMEN	4S7	CEYLON
HKp	SAN ANDRES & PROVIDENCIA	UI8	UZBEK	4W1	YEMEN
HM, HL9	KOREA	UL7	TADZHIK	4X4	ISRAEL
HP	PANAMA	UM8	KIRGHIZ	5A	LIBYA
HR	HONDURAS	UN1	KARELO-FINNISH REPUBLIC	5B4	CYPRUS
HS	THAILAND	UOS	MOLDAVIA	5H3	TANGANYIKA
H'V	VATICAN CITY	UP	LITHUANIA	5N2	NIGERIA
HZ	SAUDI ARABIA	UQ	LATVIA	5R8	MALAGASY REP. (Madagascar), Tromelin Is.
I	ITALY	UR	ESTONIA	5T5	MAURITANIA
IS	SARDINIA	VE	CANADA	5U7	NIGER
IT	SICILY	VK	AUSTRALIA	5V4	TOGO
JA	JAPAN	VK2	LORD HOWE ISLAND	5W1	WESTERN SAMOA
JTI	MONGOLIA	VK7	TASMANIA	5X5	UGANDA
JY	JORDAN	VK9	NEW GUINEA, PAPUA, NORFOLK, NAURU, CHRISTMAS & COCOS-KEELING IS.	6O	SOMALI REPUBLIC
JZp	NETHERLANDS NEW GUINEA	VXp	ANTARCTICA, HEARD & MACQUARIE IS.	6W8	SENEGAL
K	UNITED STATES	VO1	NEWFOUNDLAND	6YA	JAMAICA
KA	U. S. PERSONNEL IN JAPAN	VO2	LABRADOR	7G1	REPUBLIC OF GUINEA
KB6	BAKER, CANTON, ENDERBURY, HOWLAND & PHOENIX ISLANDS	VP1	BRITISH HONDURAS	9A1	SAN MARINO
KC4	NAVASSA IS.	VP2	FEDERATION OF BRITISH TERRITORIES IN THE CARIBBEAN	9G1	GHANA
KC4US	ANTARCTICA	VP3	BRITISH GUIANA	9K2	KUWAIT
KC6	CAROLINE ISLANDS			9L1	SIERRA LEONE
KG1	U. S. PERSONNEL IN GREENLAND			9M2	FEDERATION OF MALAYA
				9N1	NEPAL
				9Q5	REPUBLIC OF THE CONGO
				9U5	RWANDA and BURUNDI



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# PREFIXES—BY COUNTRIES

The following countries listed in alphabetical order by country show international radio amateur prefixes. Characters in ( ) designate the continent and zone in which the country is located. Abbreviations are as follows: A—Asia, AF—Africa, E—Europe, NA—North America, O—Oceania, SA—South America.

ADEN	(A-21)	VS9	GUANTANAMO BAY	(NA-8)	KG4	REVILLA GIGEDO	(NA-8)	XE4
AFGHANISTAN	(A-21)	YA	GUATEMALA	(NA-7)	TG	RHODESIA, NORTHERN	(AF-38)	VQ2
ALAND ISLANDS	(E-14)	OH	GUIANA, BRITISH	(SA-9)	VP3	RHODESIA, SOUTHERN	(AF-38)	ZE
ALASKA	(NA-1)	KL7	GUIANA, FRENCH	(SA-9)	FY7	RIO DE ORO	(AF-33)	EA9
ALBANIA	(E-15)	ZA	GUINEA, PORTUGUESE	(AF-35)	CR5	RIO MUNI	(AF-36)	EA9
ALGERIA	(AF-33)	FA	GUINEA, REPUBLIC OF	(AF-35)	7G1	RODRIGUEZ ISLAND	(AF-39)	VQ8
AMSTERDAM & ST. PAUL IS.	(AF-39)	FB8	HAITI	(NA-8)	HH	RWANDA and BURUNDI	(AF-36)	9U5
ANDAMAN & NICOBAR IS.	(A-26)	VU5	HAWAIIAN ISLANDS	(O-31)	KH6	RUMANIA	(E-20)	YO
ANDORRA	(E-14)	PX	HEARD ISLAND	(O-39)	VK	RYUKYU ISLANDS	(A-25)	KR6, KR8
ANGOLA	(AF-36)	CR6	HONDURAS	(NA-7)	HR	SAINT HELENA	(AF-36)	ZD7
ANGUILLA	(NA-8)	VP2	HONG KONG	(A-24)	VSG	SAINT KITTS, NEVIS	(NA-8)	VP2
ANTARCTICA	(SA-13)	KC4US	HOWLAND ISLAND	(O-31)	KB6	SAINT LUCIA	(NA-8)	VP2
ANTARCTICA	(O-30)	VK	HUNGARY	(E-15)	HA	SAINT MARTIN	(NA-8)	FS7
ANTIGUA, BARBUDA	(NA-8)	VP2	ICELAND	(E-40)	TF	SAINT PIERRE ISLAND	(NA-5)	FP8
ARGENTINA	(SA-13)	LU	IFNI	(AF-33)	EA9	SAINT VINCENT IS.	(NA-8)	VP2
ASCENSION ISLAND	(AF-36)	ZD8	INDIA	(A-22)	VU	SAIPAN ISLAND	(O-27)	KG6S
AUSTRALIA	(O-29 & 30)	VK	INDONESIA	(A-28)	PK	SAMOA (U.S.)	(O-32)	KS6
AUSTRIA	(E-15)	OE	IRAN	(A-21)	EP, EQ	SAMOA, WESTERN	(O-32)	5W1
AZORES ISLANDS	(E-14)	CT2	IRAQ	(A-21)	YI	SAN ANDRES & PROVIDENCIA	(NA-7)	HK
BAHAMA ISLANDS	(NA-8)	VP7	IRELAND	(E-14)	EI	SAN MARINO	(E-15)	9A1
BAHRAIN ISLANDS	(A-21)	MP4	ISLE OF MAN	(E-14)	GD	SARAWAK	(O-28)	VS4
BAKER ISLAND	(O-31)	KB6	ISRAEL	(A-20)	4X4	SARDINIA	(E-15)	IS
BALEARIC ISLANDS	(E-14)	EA6	ITALY	(E-15)	I	SAUDI ARABIA	(A-21)	HZ
BARBADOS	(NA-8)	VP5	IVORY COAST	(AF-35)	TU2	SCOTLAND	(E-14)	GM
BASUTOLAND	(AF-38)	ZS8	JAMAICA	(NA-8)	6YA	SENEGAL	(AF-35)	6W8
BECHUANALAND	(AF-38)	ZS9	JAN MAYEN ISLAND	(E-40)	LA	SERRANA BANK & RONCADOR CAY	(NA-7)	KS4B
BELGIUM	(E-14)	ON	JAPAN	(A-25)	JA	SEYCHELLES	(AF-39)	VQ9
BERMUDA ISLANDS	(NA-5)	VP9	JARVIS ISLAND	(O-31)	KP6	SICILY	(E-15)	IT
BHUTAN	(A-22)	AC5	JAVA	(O-28)	PK1-2-3	SIERRA LEONE	(AF-35)	9L1
BOLIVIA	(SA-10)	CP	JOHNSTON ISLAND	(O-31)	KJ6	SIKKIM	(A-22)	AC3
BORNEO	(O-28)	PK5	JORDAN	(A-20)	IY	SINGAPORE	(A-28)	VS1
BRAZIL	(SA-11)	PY	JUAN FERNANDEZ IS.	(SA-12)	CE	SINT MAARTEN	(NA-8)	PJ2M
BRITISH HONDURAS	(NA-7)	VP1	KAMARAN IS.	(A-21)	VS9	SOCOTRA ISLAND	(AF-37)	VS9
BRITISH NORTH BORNEO	(A-28)	ZC5	KENYA	(AF-37)	VQ4	SOLOMON ISLANDS	(O-28)	VR4
BRITISH PHOENIX ISLANDS	(O-31)	VR1	KERGUELEN ISLANDS	(AF-39)	FB8	SOMALI REPUBLIC	(AF-37)	6O
BRITISH TERRITORIES IN THE CARIBBEAN, FED. OF	(NA-8)	VP2	KERMADEC ISLANDS	(O-32)	ZL1	SOMALILAND, French	(AF-37)	FL8
BRITISH VIRGIN ISLANDS	(NA-8)	VP2	KOREA	(A-25)	HM, HL9	SOUTH AFRICA, Rep. of	(AF-38)	ZS
BRUNEI	(O-28)	VS5	KUWAIT	(A-21)	9K2	SOUTH GEORGIA	(SA-13)	VP8
BULGARIA	(E-20)	LZ	LABRADOR	(NA-2)	VO2	SOUTH ORKNEY ISLANDS	(SA-13)	VP8
BURMA	(A-26)	XZ	LACCADIVE ISLANDS	(A-22)	VU4	SOUTH SANDWICH ISLANDS	(SA-13)	VP8
CAMBODIA	(A-26)	XU	LAOS	(A-26)	XW8	SOUTH SHETLAND ISLANDS	(SA-13)	VP8
CAMEROUN	(AF-36)	FE8	LEBANON REPUBLIC	(A-20)	OD5	SOUTHWEST AFRICA	(AF-38)	ZS3
CANADA	(NA-1 to 5)	VE, VO	LIBERIA	(AF-35)	EL	SOVIET UNION:		
CANAL ZONE	(NA-7)	KZ5	LIBYA	(AF-34)	5A	EUROPEAN RUSSIAN SOCIALIST		
CANARY ISLANDS	(AF-33)	EA8	LIECHTENSTEIN	(E-14)	HE9L	FEDERATED SOVIET REP.	(E-16)	UA1, 3, 4, 6
CANTON ISLAND	(O-31)	KB6	LINE ISLANDS	(O-31)	VR3	ASIATIC RUSSIAN S.F.S.R.	(A-18, 19)	UA9, 6
CAPE VERDE ISLANDS	(AF-35)	CR4	LITTLE AMERICA	(SA-13)	KC4	UKRAINE	(E-16)	UB5
CAROLINE ISLANDS	(O-27)	KC6	LORD HOWE ISLAND	(O-30)	VK2	WHITE RUSSIAN S.S.R.	(E-16)	UC2
CAYMAN ISLANDS	(NA-8)	VP5	LUXEMBOURG	(E-14)	LX	AZERBAIJAN	(E-21)	UD6
CELEBES & MOLUCCA ISLANDS	(A-28)	PK6	MACAO	(A-24)	CR9	GEORGIA	(E-21)	UF6
CENTRAL AFRICAN REPUB.	(AF-36)	TL8	MACQUARIE ISLAND	(O-30)	VK	ARMENIA	(E-21)	UG6
CEYLON	(A-22)	4S7	MADEIRA ISLANDS	(AF-33)	CT3	TURKMEN	(A-17)	UH8
CHAGOS ISLANDS	(AF-39)	VQ8	MALAGASY REP.	(AF-39)	5R8	UZBEK	(A-17)	UI8
CHANNEL ISLANDS	(E-14)	GC	(Madagascar)			TADZHIK	(A-17)	UI8
CHILE	(SA-12)	CE	MALAYA, FEDERATION OF	(A-28)	9M2	KAZAKH	(A-17)	UL7
CHINA	(A-23 & 24)	BY	MALDIVES ISLANDS	(A-22)	VS9	KIRGHIZ	(A-17)	UM8
CHRISTMAS ISLAND	(O-29)	VK9	MALI REPUBLIC	(AF-35)	TZ	KARELO-FINNISH REP.	(E-16)	UN1
CLIPPERTON ISLAND	(NA-7)	FO8	MALTA	(E-15)	ZB1	MOLDAVIA	(E-16)	UO5
COCOS ISLAND	(NA-7)	T19	MANCHURIA	(A-24)	C9	LITHUANIA	(E-15)	UP
COCOS-KEELING IS.	(O-29)	VK9	MARIANAS ISLANDS (Guam)	(O-27)	KG6	LATVIA	(E-15)	UQ
COLOMBIA	(SA-9)	HK	MARSHALL ISLANDS	(O-31)	KX6	ESTONIA	(E-15)	UR
COMORO ISLANDS	(AF-39)	PH8	MARTINIQUE	(NA-8)	FM7	SPAIN	(E-14)	EA
CONGO REPUBLIC	(AF-36)	TN8	MAURITANIA	(AF-35)	5T5	SPANISH GUINEA	(AF-36)	EA
CONGO, REPUBLIC OF THE	(AF-36)	9Q5	MAURITIUS IS.	(AF-39)	VQ8	SPANISH SAHARA	(A-33)	EA9
COOK ISLANDS	(O-32)	ZK1	MEXICO	(NA-6)	XE	SUDAN	(AF-34)	ST
CORSICA	(E-15)	FC	MIDWAY ISLAND	(O-31)	KM6	SUMATRA	(A-28)	PK4
COSTA RICA	(NA-7)	TI	MIQUELON ISLAND	(NA-5)	FP8	SURINAM (Netherlands Guiana)	(SA-9)	PZ
CRETE	(E-20)	SV	MONACO	(E-14)	3A2	SVALBARD	(E-40)	LA
CROZET ISLAND	(AF-39)	FB8	MONGOLIA	(A-23)	JT1	SWAN ISLAND	(NA-7)	KS4
CUBA	(NA-8)	CM, CO	MONTERRAT	(NA-8)	VP2	SWAZILAND	(AF-38)	ZS7
CYPRUS	(A-20)	5B4	MOROCCO	(AF-33)	CN	SWEDEN	(E-14)	SL, SM
CZECHOSLOVAKIA	(E-15)	OK	MOROCCO (Zona Norte)	(AF-33)	CN9	SWITZERLAND	(E-14)	HB
DAHOMY REPUBLIC	(AF-35)	TY2	MOZAMBIQUE	(AF-37)	CR7	SYRIA	(A-20)	YK
DAS ISLAND	(A-21)	MP4	MUSCAT & OMAN	(A-21)	MP4	TANGANYIKA	(AF-37)	SH3
DENMARK	(E-14)	OZ	NAURU ISLAND	(O-31)	VK9	TASMANIA	(O-30)	VK7
DOECANESE ISLANDS	(E-20)	SV5	NAVASSA ISLAND	(NA-8)	KC4	TCHAD REPUBLIC	(AF-36)	TH8
DOMINICA	(NA-8)	VP2	NEPAL	(A-22)	9N1	THAILAND	(A-26)	HS
DOMINICAN REPUBLIC	(NA-8)	HI	NETHERLANDS	(E-14)	PA, PI	TIBET	(A-23)	AC4
EASTER ISLAND	(SA-12)	CE	NETHERLANDS ANTILLES	(SA-9)	PJ	TIMOR, Portuguese	(O-28)	CR8
ECUADOR	(SA-10)	HC	NETHERLANDS NEW GUINEA	(O-28)	JZ	TINIAN ISLAND	(O-27)	KG6T
EGYPT	(AF-34)	SU	NEW CALEDONIA	(O-32)	FK8	TOGO	(AF-35)	5V4
EL SALVADOR	(NA-7)	YS	NEWFOUNDLAND	(NA-5)	VO1	TONGA (Friendly) ISLANDS	(O-32)	VR5
ENDERBURY ISLAND	(O-31)	KB6	NEW GUINEA, N.E.	(O-28)	VK9	TRIESTE	(E-15)	II
ENGLAND	(E-14)	G	NEW HEBRIDES	(O-32)	FU8, YJ	TRINIDADE & MARTIM		
ETHIOPIA	(AF-37)	ET3	NEW ZEALAND	(O-32)	ZL	VAZ IS.	(SA-11)	PY
FAEROES ISLANDS	(E-14)	OY	NICARAGUA	(NA-7)	YN	TRINIDAD & TOBAGO	(SA-9)	VP4
FALKLAND ISLANDS	(SA-13)	VP8	NIGER	(AF-35)	SU7	TRISTAN de CUNHA & GOUGH ISLANDS	(AF-38)	ZD9
FANNING ISLAND	(O-31)	VR3	NIGERIA	(AF-35)	SN2	TROMELIN ISLAND	(AF-39)	FB8
FERNANDO DE NORONHA	(SA-11)	PY	NIUE	(O-32)	ZK2	TRUCIAL OMAN	(A-21)	MP4
FUJI ISLANDS	(O-32)	VR2	NORFOLK ISLAND	(O-32)	VK9	TUNISIA	(AF-33)	3V8
FINLAND	(E-15)	OH	NORTHERN IRELAND	(E-14)	GI	TURKEY	(A-20)	TA
FORMOSA	(A-24)	BV	NORWAY	(E-14)	LA	TURKS & CAICOS ISLANDS	(NA-8)	VP5
FRANCE	(E-14)	F	NYASALAND	(AF-37)	ZD6	UGANDA	(AF-37)	5X5
FRENCH OCEANIA	(O-32)	FO8	OKINAWA	(A-25)	KR6, KR8	UNITED STATES of AMERICA	(NA-3, 4, 5)	W, K
GABON REPUBLIC	(AF-36)	TR8	OMAN	(A-21, 22)	MP4	UPPER VOLTA, Rep. of	(AF-35)	XT2
GALAPAGOS ISLANDS	(SA-10)	HC8	PAKISTAN	(O-31)	KP6	URUGUAY	(SA-13)	CX
GAMBIA	(AF-35)	ZD3	PALMYRA ISLANDS	(NA-7)	HP	VATICAN CITY	(E-15)	HV
GERMAN FEDERAL REP., WEST	(E-14)	DJ, DL	PANAMA	(O-28)	VK9	VENEZUELA	(SA-9)	VV
GERMAN DEMOCRATIC REP., EAST	(E-14)	DM	PAPUA TERRITORY	(SA-11)	ZP	VIETNAM	(A-26)	3W8
GHANA	(AF-35)	9G1	PARAGUAY	(SA-10)	OA	VIRGIN ISLANDS	(NA-8)	KV4
GIBRALTAR	(E-14)	ZB2	PERU	(O-27)	DU	VOLCANO IS.	(A-25)	KG6I
GILBERT ISLANDS	(O-31)	VR1	PHILIPPINE ISLANDS	(O-31)	KB6	WAKE ISLAND	(O-31)	KW6
GOA	(A-22)	CR8	PHOENIX ISLANDS	(O-32)	VR6	WALES	(E-14)	GW
GREECE	(E-20)	SV	PITCAIRN ISLAND	(E-15)	SP	WALLIS & FUTUNA ISLANDS	(O-32)	FW8
GREENLAND	(NA-40)	OX	POLAND	(E-14)	CT1	YEMEN	(A-21)	4W1
GUADLOUPE	(NA-8)	FG7	PORTUGAL	(AF-38)	ZS2	YUGOSLAVIA	(E-15)	YT, YU
GUAM	(O-27)	KG6	PRINCE EDWARD & MARION ISLANDS	(NA-8)	KP4	ZANZIBAR	(AF-37)	VQ1
			PUERTO RICO	(A-21)	MP4			
			QATAR	(AF-39)	FR7			
			REUNION ISLAND					



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A product that is consistently advertised in QST month after month, year after year, has to be good. Over 10,000 GOTHAM antennas have been purchased by QST readers. Even the "price-is-no-object" customers choose GOTHAM antennas on the basis of performance and value.

Airmail Order Today—We Ship Tomorrow

## FACTS ON THE GOTHAM V-80 VERTICAL ANTENNA

- If K6INI can do it, so can you.
- Absolutely no guying needed.
- Radials not required
- Only a few square inches of space needed.
- Four metal mounting straps furnished.
- Special B & W loading coil furnished.
- Every vertical is complete, ready for use.
- Mount it at any convenient height.
- No relays, traps, or gadgets used.
- Accepted design — in use for many years.
- Many thousands in use the world over.
- Simple assembly, quick installation.
- Withstands 75 mph wind-storms.
- Non-corrosive aluminum used exclusively.
- Omnidirectional radiation.
- Multi-band, V80 works 80, 40, 20, 15, 10, 6.
- Ideal for novices, but will handle a Kw.
- Will work with any receiver and xmitter.
- Overall height 23 feet.
- Uses one 52 ohm coax line.
- An effective modern antenna, with amazing performance. Your best bet for a lifetime antenna at an economical price. **ONLY \$16.95.**

73,  
GOTHAM

**FREE**

Send a card for our valuable catalog of 50 different antennas with specifications and characteristics. Gives bands and frequencies covered, element information, size of tubing used, boom length, shipping weight, feed line used, polarization, and other data.

## YOU COULD WORK WONDERS WITH A GOTHAM VERTICAL ANTENNA!

### IS K6INI THE WORLD'S CHAMPION DX OPERATOR?

Judge for yourself! Read his letter and count the DX he has worked—with only 65 watts and a \$16.95 Gotham V-80 Vertical Antenna.

2405 Bowditch, Berkeley 4, California  
January 31, 1959

Gentlemen:

I just thought I would drop you a line and let you know how pleased I am with your V-80 vertical antenna. I have been using it for almost two years now, and am positively amazed at its performance with my QRP 65 watts input! Let me show you what I mean:

I have worked over 100 countries and have received very fine reports from many DX stations, including 599 reports from every continent except Europe (589)! I have also worked enough stations for my WAC, WAS, WAJAD and ADXC awards, and I am in the process of working for several other awards. And all this with your GOTHAM V-80 vertical antenna!

Frankly, I fail to see how anyone could ask for better performance with such low power, limited space and a limited budget. In my opinion, the V-80 beats them all in its class.

I am enclosing a list of DX countries I have worked to give you an idea of what I have been talking about.

Wishing you the best for 1959, I am

Sincerely yours,

Thomas G. Gabbert, K6INI (Ex-T12TG)

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1803 PURDY AVENUE  
MIAMI BEACH 39, FLORIDA, U.S.A.

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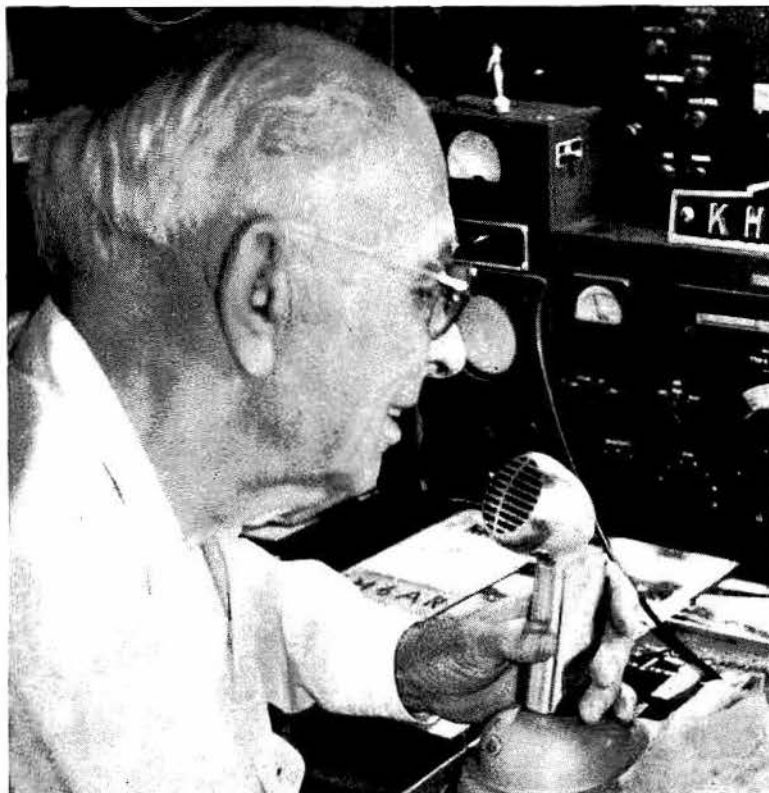
City..... Zone..... State.....

**FILL IN AND SEND TODAY!**

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	ATLANTA, GA.	BIRMINGHAM, ALA.	BISMARCK, N. D.	BOSTON, MASS.	BUFFALO, N. Y.	CHARLESTON, W. VA.	CHEYENNE, WYO.	CHICAGO, ILL.	CLEVELAND, OHIO	COLUMBIA, S. C.	DALLAS, TEXAS	DENVER, COLORADO	DES MOINES, IOWA	DETROIT, MICH.	EL PASO, TEXAS	HELENA, MONTANA	HOUSTON, TEXAS	INDIANAPOLIS, IND.	JACKSONVILLE, FLA.	KANSAS CITY, MO.	LITTLE ROCK, ARK.	LOS ANGELES, CALIF.	LOUISVILLE, KY.	MIAMI, FLORIDA	MILWAUKEE, WIS.	MINNEAPOLIS, MINN.	NASHVILLE, TENN.	NEW ORLEANS, LA.	NEW YORK, N. Y.	NORFOLK, VA.	PHILADELPHIA, PA.	PHOENIX, ARIZONA	PITTSBURGH, PA.	ST. LOUIS, MO.	SALT LAKE CITY, UTAH	SAN FRANCISCO, CALIF.	SEATTLE, WASHINGTON	WASHINGTON, D. C.	WILMINGTON, N. C.
ATLANTA, GA.	264	322	47	24	25	301	343	15	96	269	297	320	7	271	310	251	347	145	306	281	281	347	154	345	331	321	234	48	64	48	278	27	318	296	289	308	48	84	
BIRMINGHAM, ALA.	82	326	50	31	40	304	356	26	84	268	299	328	17	270	312	246	5	125	314	287	281	10	142	355	338	0	219	52	67	53	278	37	333	298	290	309	53	83	
BISMARCK, N. D.	132	137	92	97	115	209	114	105	124	167	205	133	104	198	273	165	119	132	148	150	233	123	135	109	108	131	151	99	111	102	217	106	134	237	249	282	107	119	
BOSTON, MASS.	236	241	291	277	247	278	273	267	226	254	275	275	274	262	293	246	263	220	268	253	273	256	207	278	286	249	237	235	219	233	268	258	262	280	280	295	236	217	
BUFFALO, N. Y.	208	217	291	92	206	273	264	237	192	241	269	268	261	252	290	231	243	191	258	237	267	231	184	274	286	225	219	118	160	134	261	199	248	276	276	293	159	174	
CHARLESTON, W. VA.	208	223	307	61	24	287	309	359	174	251	282	293	345	260	300	238	293	180	279	251	274	270	174	316	311	245	223	66	108	71	269	31	275	286	282	301	80	143	
CHEYENNE, WYO.	108	112	26	76	76	91	81	81	103	140	187	83	79	189	319	143	90	113	101	119	241	95	119	76	62	104	128	81	92	83	219	84	98	268	262	303	87	100	
CHICAGO, ILL.	161	175	302	82	78	125	272	93	144	221	266	268	80	242	293	210	151	155	245	208	262	157	156	350	308	173	190	91	116	97	254	101	212	274	272	295	106	131	
CLEVELAND, OHIO	197	209	297	80	55	179	277	176	240	272	275	310	252	293	228	245	180	261	235	268	226	175	290	296	219	214	95	136	105	262	127	250	278	277	296	124	156		
COLUMBIA, S. C.	268	267	317	41	10	354	299	329	356	270	295	311	350	271	308	256	326	189	300	279	282	320	174	331	323	297	246	39	53	37	279	7	305	295	290	307	33	85	
DALLAS, TEXAS	81	82	349	57	49	61	325	36	50	80	319	15	45	266	325	157	47	97	15	61	280	55	112	32	11	65	115	60	71	61	277	55	40	308	291	315	63	80	
DENVER, COLORADO	103	107	22	73	72	87	6	75	77	99	134	74	74	189	325	138	84	109	91	112	246	90	116	70	55	98	124	78	88	80	224	80	91	283	267	308	83	96	
DES MOINES, IOWA	134	144	318	80	78	105	271	84	87	123	197	262	81	231	297	187	105	135	197	171	257	116	141	69	5	133	165	87	104	91	247	92	137	273	270	296	97	115	
DETROIT, MICH.	188	200	295	86	79	164	273	263	129	168	233	268	268	248	291	222	224	174	254	227	265	208	171	282	292	206	207	100	133	109	258	128	238	275	274	294	124	151	
EL PASO, TEXAS	77	78	14	58	54	64	8	50	56	76	79	8	42	53	345	98	57	86	48	71	285	62	97	46	33	68	92	61	69	62	290	59	57	335	298	327	64	75	
HELENA, MONTANA	112	116	85	84	88	100	133	97	93	108	134	141	105	92	162	136	101	115	115	122	203	105	119	94	91	111	127	89	98	92	180	94	109	179	224	283	95	104	
HOUSTON, TEXAS	64	60	348	50	40	49	329	25	39	67	338	325	6	34	285	327	34	84	3	26	288	40	103	22	5	46	86	52	60	53	289	45	24	314	297	319	5	68	
INDIANAPOLIS, IND.	166	185	308	72	58	110	281	332	62	143	234	276	290	41	250	298	220	157	267	226	267	168	158	338	316	188	199	80	107	85	261	80	251	281	277	298	94	127	
JACKSONVILLE, FLA.	327	309	324	33	9	1	308	339	0	8	286	304	323	355	282	314	273	340	314	300	288	338	163	341	332	326	271	29	34	28	287	8	323	303	295	312	23	39	
KANSAS CITY, MO.	120	129	332	72	67	90	288	60	73	111	196	278	15	66	236	306	184	82	126	157	262	95	134	50	9	113	157	78	93	81	253	79	97	282	275	302	85	105	
LITTLE ROCK, ARK.	97	104	335	59	48	65	307	26	48	92	243	300	352	41	260	315	208	43	114	338	276	55	128	21	356	71	158	62	76	64	271	56	22	297	286	309	67	89	
LOS ANGELES, CALIF.	81	82	41	62	61	70	52	62	65	79	88	57	60	62	100	19	96	67	87	67	81	70	94	59	52	76	92	65	71	66	95	67	69	35	319	348	68	78	
LOUISVILLE, KY.	166	190	313	66	47	87	287	339	43	137	242	282	301	26	256	302	227	348	156	280	239	271	158	342	322	202	205	71	98	75	266	63	278	285	281	301	82	120	
MIAMI, FLORIDA	337	326	329	22	3	355	313	342	356	355	302	310	329	353	291	318	290	342	345	321	315	293	341	342	335	334	298	18	16	15	293	1	330	308	299	315	11	13	
MILWAUKEE, WIS.	162	175	297	87	88	132	267	170	107	147	218	261	253	99	239	290	207	157	156	235	204	259	160	157	298	172	188	98	121	103	251	111	203	271	270	293	113	135	
MINNEAPOLIS, MINN.	145	154	291	91	96	123	248	125	108	135	193	242	184	105	227	283	186	132	144	189	175	248	137	146	114	148	169	99	116	104	237	110	159	259	261	287	111	127	
NASHVILLE, TENN.	140	180	320	59	40	61	295	354	36	114	251	290	318	24	261	307	231	8	142	298	254	275	22	150	353	333	205	63	83	65	271	50	313	291	285	305	68	103	
NEW ORLEANS, LA.	50	37	337	46	32	38	318	9	28	60	299	313	347	22	283	321	270	17	86	339	339	288	22	114	7	351	23	46	56	47	287	35	359	308	296	315	47	64	
NEW YORK, N. Y.	233	240	296	54	303	251	281	281	280	223	255	278	280	286	262	294	244	269	213	271	253	274	259	202	287	293	251	237	205	229	269	269	266	283	282	297	235	208	
NORFOLK, VA.	249	253	306	35	342	291	290	303	319	236	264	286	295	318	268	301	253	294	217	285	267	279	284	198	308	307	269	244	25	16	274	322	284	289	286	302	343	208	
PHILADELPHIA, PA.	233	240	298	52	317	255	283	285	289	221	255	279	283	294	263	296	246	273	212	273	255	275	263	199	292	296	252	235	49	197	270	279	269	284	282	298	235	203	
PHOENIX, ARIZONA	80	83	29	61	59	69	35	58	62	79	89	40	55	59	108	0	100	64	89	62	80	277	70	97	55	45	74	93	64	72	66	64	66	1	300	334	68	79	
PITTSBURGH, PA.	210	221	300	72	18	213	280	286	308	188	246	276	281	310	257	295	235	264	189	268	244	271	246	181	296	299	234	222	85	140	96	265	261	281	279	297	123	165	
ST. LOUIS, MO.	134	150	320	70	60	90	287	30	63	119	224	280	319	53	248	303	207	68	137	280	204	267	94	143	20	342	130	179	75	95	79	260	74	284	278	301	84	110	
SALT LAKE CITY, UTAH	99	101	50	73	74	86	83	79	78	95	118	98	80	76	152	359	123	84	103	91	104	220	88	109	75	67	95	114	78	86	80	181	80	90	254	315	83	92	
SAN FRANCISCO, CALIF.	86	86	54	66	67	75	70	70	83	96	75	70	68	109	39	101	73	90	77	88	136	77	96	67	62	81	97	69	76	71	114	71	77	66	1	73	81		
SEATTLE, WASHINGTON	103	105	87	81	84	94	111	92	89	100	118	116	97	88	136	96	120	95	105	103	109	165	97	109	90	88	102	114	85	92	87	147	89	100	128	181	90	97	
WASHINGTON, D. C.	233	240	302	52	342	263	285	293	307	215	256	281	287	308	263	298	245	280	205	277	257	275	268	192	300	302	254	235	53	163	53	270	305	273	285	283	300	189	
WILMINGTON, N. C.	267	267	313	32	355	325	297	318	339	267	270	293	306	335	274	307	258	313	222	296	278	283	305	194	322	317													



**KH6AR**

Wahiawa, Oahu, Hawaii  
reports:

**"most natural  
sounding  
SSB mike yet"**

We'll let Ken Bryan's (KH6AR) letter to us speak for itself:

"I've been using my Shure 440SL on regular skeds with people who know my voice from eyeball QSO. That includes my daughter who doesn't ordinarily like the tone of sideband. Everybody tells me that it's the most natural sounding SSB mike yet . . . especially my daughter.

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**ONLY \$2850 net**

(complete with stand, grip-to-talk switch, 7 ft. highest quality 2 conductor shielded cable.)

**A87K Modification Kit.** Modifies 440SL for either VOX or push-to-talk. \$3.25 net.

# SHURE 440SL

**CONTROLLED MAGNETIC SSB, AM, FM MICROPHONE**

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0000	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM
0100	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night
0200	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM
0300	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM
0400	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM
0500	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM
0600	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM
0700	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM
0800	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM
0900	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM
1000	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM
1100	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM
1200	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM
1300	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon
1400	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM
1500	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM
1600	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM
1700	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM
1800	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM
1900	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM
2000	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM
2100	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
2200	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM
2300	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM

With this chart you can convert standard time in any time zone to GMT or tell what time it is in other parts of the world. To correctly use this chart visualize each horizontal line as a complete circle. From your time zone tracing horizontally to the right (Counter Clockwise) it will be tomorrow when you pass midnight and yesterday when you pass the International date line. To the left (Clockwise) it will be yesterday when you pass midnight and tomorrow when you pass the International date line. There is no change in date when you pass both midnight and the International date line going in one direction. For instance at 8 PM in New York Eastern Standard Time it is 2 AM tomorrow in Berlin, Germany and 11 AM tomorrow in Sydney, Australia. Always trace in the shortest direction from your time zone to find what time it is in any other zone. Copyright 1938 Radio Amateur Call Book, Inc., Chicago, USA.



## Federal Communications Commission Examination Points

Examinations for commercial and amateur radio operator licenses are conducted at the following F.C.C. field offices on the days designated by the Engineer in Charge of each office. Specific dates should be obtained from the Engineer in Charge.

Radio District	Address of the Engineer in charge
1—BOSTON 9, MASSACHUSETTS	1600 Custom House
2—NEW YORK 14, NEW YORK	748 Federal Building 641 Washington Street
3—PHILADELPHIA 6, PENNSYLVANIA	1005 New U. S. Customhouse
4—BALTIMORE 2, MARYLAND	415 U. S. Custom House Gay and Water Streets
5—NORFOLK 10, VIRGINIA	402 Federal Building
6—ATLANTA 3, GEORGIA	718 Atlanta National Bldg., 50 Whitehall St., S.W.
6S—SAVANNAH, GEORGIA (P. O. 77)	214 Post Office Building
7—MIAMI 1, FLORIDA	312 Federal Building
7T—TAMPA 6, FLORIDA	Rm. 201-221 N. Howard Ave.
8—NEW ORLEANS 12, LOUISIANA	608 Federal Office Building 600 South Street
8M—MOBILE 10, ALABAMA	419 U. S. Court and Customs House
9—HOUSTON 2, TEXAS	New Federal Office Building 515 Rusk—Room 5636
9B—BEAUMONT, TEXAS (P. O. Box 1527)	301 Post Office Building 300 Willow Street
10—DALLAS 2, TEXAS	401 States General Life Insurance Bldg. 708 Jackson Street
11—LOS ANGELES 14, CALIFORNIA	Mez 50, 849 South Broadway
11SD—SAN DIEGO 1, CALIFORNIA	Fox Theater Building 1245 Seventh Avenue
11SP—SAN PEDRO, CALIFORNIA	356 West Fifth Street
12—SAN FRANCISCO 26, CALIFORNIA	323-A Customhouse 555 Battery Street
13—PORTLAND 5, OREGON	201 U. S. Court House 620 S. W. Main Street
14—SEATTLE 4, WASHINGTON	802 Federal Office Building 1st Avenue and Marion
15—DENVER 2, COLORADO	521 New Customhouse 19th between California & Stout Streets
16—ST. PAUL 2, MINNESOTA	208 Federal Courts Building 6th & Market Streets
17—KANSAS CITY 6, MISSOURI	3100 Federal Office Building 911 Walnut Street
18—CHICAGO 4, ILLINOIS	826 U. S. Courthouse 219 South Clark Street
19—DETROIT 26, MICHIGAN	1029 Federal Building
20—BUFFALO 3, NEW YORK	328 Post Office Building Ellicott and Swan Streets
21—HONOLULU 13, HAWAII	502 Federal Bldg. P. O. Box 1021
22—SAN JUAN 13, PUERTO RICO	322-323 Federal Building Post Office Box 2987
23—ANCHORAGE, ALASKA	Room 55, U. S. Post Office Bldg.
23J—JUNEAU, ALASKA	6 Shattuck Building
24—WASHINGTON 25, D. C.	718 Jackson Pl., N. W.

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ATLANTA, GA.	43	325	153	242	160	26	48	45	158	51	114	141	38	198	170	30	280	102	160	170	45	58	329	227	156	32	34	47	42	170	139	51	179	168	336	346	33	254	324
BIRMINGHAM, ALA.	42	325	151	241	155	23	47	44	156	50	113	137	37	191	158	29	279	101	157	167	44	57	327	221	154	36	33	47	42	165	137	50	173	166	334	342	32	253	323
BISMARCK, N. D.	42	315	141	240	143	7	45	43	146	40	97	131	35	162	142	27	261	81	146	154	45	56	317	177	145	84	33	46	39	151	129	46	153	155	325	328	30	256	314
BOSTON, MASS.	51	321	167	253	186	36	56	53	169	60	117	172	45	217	210	36	284	105	177	187	53	68	346	235	168	331	40	56	50	191	153	59	205	181	349	7	39	270	335
BUFFALO, N. Y.	49	320	160	250	172	29	53	51	163	55	112	159	42	203	189	34	279	99	168	178	51	65	338	222	161	54	38	53	47	179	146	56	189	173	342	356	37	266	329
CHARLESTON, W. VA.	46	322	156	246	167	28	50	47	160	53	113	151	40	201	183	32	279	101	164	174	48	61	334	224	159	37	36	50	45	175	143	53	185	170	339	351	35	259	327
CHEYENNE, WYO.	38	322	138	236	135	3	41	40	143	37	100	122	32	151	127	24	263	84	141	148	41	52	312	166	142	69	30	42	36	143	126	42	144	152	322	321	27	250	312
CHICAGO, ILL.	45	320	152	245	158	21	49	47	156	49	108	144	39	186	165	31	274	95	158	167	48	60	328	207	154	66	36	50	44	167	138	51	173	166	335	343	34	260	323
CLEVELAND, OHIO	47	320	157	247	167	27	52	49	161	53	111	153	41	198	182	33	278	99	165	174	50	63	334	219	159	53	37	52	46	175	143	54	184	171	340	352	36	263	327
COLUMBIA, S. C.	44	324	156	243	166	29	49	46	161	53	115	148	39	206	186	31	281	103	164	175	46	59	333	232	159	24	35	48	44	175	142	52	187	171	339	352	34	255	327
DALLAS, TEXAS	39	326	142	237	138	12	43	41	148	44	110	122	34	161	123	26	274	97	146	154	42	53	317	189	147	48	31	43	38	149	130	45	150	157	326	326	29	249	317
DENVER, COLORADO	38	323	137	235	133	2	41	39	143	37	101	120	32	149	124	24	264	85	141	147	41	52	312	164	142	66	29	42	35	142	125	42	142	152	321	320	27	249	312
DES MOINES, IOWA	43	320	146	242	149	15	47	44	151	45	105	135	37	173	149	28	270	90	152	160	46	58	323	194	150	68	34	47	41	158	134	48	162	161	330	335	32	256	319
DETROIT, MICH.	47	320	156	247	166	25	51	49	160	52	110	151	41	195	178	32	277	97	163	173	50	63	333	216	159	62	37	52	46	173	142	54	182	169	339	350	35	263	326
EL PASO, TEXAS	36	329	135	233	125	1	39	37	142	37	108	111	30	136	106	22	270	94	137	142	38	49	308	150	140	52	27	40	34	135	124	41	131	149	319	313	25	245	312
HELENA, MONTANA	36	318	133	233	130	355	39	38	138	31	89	119	30	144	124	22	252	71	136	142	39	49	308	154	137	78	28	40	33	138	121	39	138	147	317	316	25	249	307
HOUSTON, TEXAS	39	328	143	237	137	15	43	41	149	45	113	120	34	162	116	26	277	100	147	154	41	53	317	199	147	41	30	43	38	149	130	46	150	158	327	326	29	247	318
INDIANAPOLIS, IND.	45	321	153	244	160	23	49	47	157	50	110	144	39	190	168	31	276	97	160	169	47	60	329	212	155	54	35	49	43	168	139	52	176	167	336	345	34	259	324
JACKSONVILLE, FLA.	42	326	155	242	163	30	48	44	160	53	117	142	37	209	185	30	283	105	163	173	44	57	331	239	158	20	33	47	42	174	141	51	187	170	338	350	33	251	326
KANSAS CITY, MO.	42	322	145	240	146	14	45	43	151	45	107	132	36	171	143	28	271	93	151	159	44	56	321	193	149	61	33	46	40	156	133	47	159	160	329	333	31	254	319
LITTLE ROCK, ARK.	41	325	146	240	147	17	45	43	152	47	111	130	36	175	141	28	275	98	152	160	43	56	322	203	150	47	32	45	40	157	134	48	161	161	330	334	31	252	320
LOS ANGELES, CALIF.	31	333	127	228	116	347	34	33	135	28	102	104	26	121	100	18	260	84	128	132	34	44	300	126	134	58	24	35	28	124	117	34	119	141	312	303	21	241	306
LOUISVILLE, KY.	44	322	153	244	160	23	49	46	157	50	111	144	39	191	168	30	277	98	160	169	47	60	329	215	156	47	35	49	43	168	139	51	176	167	336	345	33	257	324
MIAMI, FLORIDA	41	328	155	240	163	33	47	43	160	54	118	138	37	223	217	30	285	108	163	175	43	56	331	254	158	13	33	46	42	176	140	50	194	171	339	351	32	247	327
MILWAUKEE, WIS.	45	319	152	245	158	20	50	47	156	49	107	145	39	185	165	31	273	94	158	167	48	61	328	205	154	72	36	50	44	166	138	52	173	165	335	343	34	261	323
MINNEAPOLIS, MINN.	44	317	147	243	152	15	48	46	152	46	103	139	38	175	154	29	270	90	153	161	47	59	324	193	150	81	35	49	42	160	134	49	164	161	331	337	33	259	319
NASHVILLE, TENN.	43	323	151	242	157	23	48	45	156	50	112	140	38	190	162	30	277	99	158	167	46	58	328	216	155	43	34	48	42	166	138	50	174	166	335	343	33	255	324
NEW ORLEANS, LA.	40	327	147	239	146	21	45	42	153	48	114	127	35	182	133	28	279	102	152	161	43	55	322	220	151	35	32	45	40	158	135	48	163	162	331	334	30	249	321
NEW YORK, N. Y.	49	321	164	251	180	34	54	51	167	58	116	166	43	214	204	35	283	104	173	184	51	66	343	233	165	4	39	54	48	187	150	57	199	177	346	3	38	266	333
NORFOLK, VA.	46	323	161	247	176	33	51	48	165	56	116	160	41	213	203	33	283	104	170	181	48	62	339	235	163	12	36	51	46	184	147	55	197	175	344	0	36	260	331
PHILADELPHIA, PA.	48	322	163	249	178	33	53	50	166	57	115	164	42	212	202	34	282	103	172	182	50	65	341	232	164	11	38	53	48	185	149	56	197	176	345	2	37	264	332
PHOENIX, ARIZONA	34	330	131	231	121	354	37	35	138	33	105	108	28	129	104	20	265	89	133	138	36	47	304	137	137	56	26	38	31	130	121	38	126	146	316	308	23	243	309
PITTSBURGH, PA.	47	321	158	247	170	29	52	49	162	54	113	155	41	203	187	33	279	100	167	176	49	63	336	224	160	41	37	52	46	178	145	55	188	172	341	354	36	262	329
ST. LOUIS, MO.	43	322	149	242	153	19	47	45	154	48	109	137	37	181	156	29	274	96	155	164	46	58	325	204	152	55	34	47	42	162	136	49	167	163	332	339	32	256	321
SALT LAKE CITY, UTAH	35	325	132	232	127	355	38	36	139	32	96	114	29	138	116	21	258	79	135	141	38	48	307	149	136	67	27	39	32	135	121	38	134	146	317	313	24	247	308
SAN FRANCISCO, CALIF.	30	333	125	226	115	343	32	31	132	24	95	104	24	121	101	16	252	74	126	130	33	42	298	126	131	62	22	33	26	123	115	32	119	139	310	301	19	240	303
SEATTLE, WASHINGTON	31	321	125	227	120	345	33	32	131	23	79	110	25	131	113	17	240	58	128	133	34	43	300	138	130	75	24	35	27	128	113	32	127	139	309	306	20	243	301
WASHINGTON, D. C.	47	322	161	248	175	32	52	49	164	56	115	160	41	210	198	33	282	103	170	180	49	63	339	231	163	20	37	52	47	182	147	55	194						



## "Q" SIGNALS

Given below are a number of Q signals whose meanings most often need to be expressed with brevity and clearness in amateur work. (Q abbreviations take the form of questions only when each is sent followed by a question mark.)

- QAV Are you calling me? I am calling.....
- QRG Will you tell me my exact frequency in kilocycles? Your frequency is.....kc.
- QRH Does my frequency vary? Your frequency varies.
- QRI How is the tone of my transmission? The tone of your transmission is..... (1. good; 2. variable; 3. bad).
- QRJ Are you receiving me badly? Are my signals weak? I cannot receive you. Your signals are too weak.
- QRK What is the readability of my signals (1 to 5)? The readability of your signals is.....(1 to 5).
- QRL Are you busy? I am busy or busy with (.....).
- QRM Are you being interfered with? I am interfered with.
- QRN Are you troubled by atmospherics? I am being troubled by atmospherics.
- QRQ Shall I send faster? Send faster (..... words per min.).
- QRS Shall I send more slowly? Send more slowly (.....w.p.m.).
- QRT Shall I stop sending? Stop sending.
- QRU Have you anything for me? I have nothing for you.
- QRV Are you ready? I am ready.
- QRW Shall I tell.....that you are calling him? Please tell.....that I am calling him.
- QRX When will you call again? I will call you again at.....hours (on.....kc).
- QRZ By whom am I being called? You are being called by.....
- QSA What is the strength of my signals (1 to 5)? The strength of your signals is.....(1 to 5).
- QSB Does the strength of my signals vary? The strength of your signals varies.
- QSD Is my keying correct? Are my signals distinct? Your keying is incorrect; your signals are bad.
- QSG Shall I send.....telegrams (or one) at a time? Send.....telegrams at a time.
- QSL Can you give me acknowledgment of receipt? I give you acknowledgment of receipt.
- QSM Shall I repeat the last telegram I sent you? Repeat the last telegram you sent me.
- QSO Can you communicate with.....direct (or through.....)? I can communicate with.....direct (or through.....).
- QSP Will you relay to.....? I will relay to.....
- QSV Shall I send a series of VVV.....? Send a series of VVV.....
- QSW Will you send on.....kcs? etc. I will send on.....kcs, etc.
- QSX Will you listen for.....(call sign) on.....kcs? I am listening for.....on.....kcs.
- QSY Shall I change to.....kilocycles without changing the type of wave? Change to.....kc. without changing type of wave.
- QSZ Shall I send each word or group twice? Send each word or group twice.
- QTA Shall I cancel nr.....as if it had not been sent? Cancel nr.....as if it had not been sent.
- QTB Do you agree with my number of words? I do not agree with your number of words; I will repeat the first letter of each word and the first figure of each number.
- QTC How many telegrams have you to send? I have.....telegrams for you or for.....
- QTH What is your position (location)? My location is.....(by any indication).
- QTR What is the exact time? The time is.....
- CQ is the general call to any station.
- Special abbreviations adopted by ARRL:
- QST General call preceding a message addressed to all amateurs and ARRL Members. This is in effect "CQ ARRL."
- QRRR Official ARRL "land SOS." A distress call for emergency use only by station in an emergency situation.

### A.R.R.L.-NET "QN" SIGNALS

- QNA Answer in pre-arranged order.
- QNB Act as relay between.....and.....
- QNC All Net stations copy.
- QND Net is directed.
- QNE Entire Net please stand by.
- QNF Net is free.
- QNG Take over as Net Control Station.
- QNH Your Net frequency is high.
- QNI Report into Net or I report into Net.
- QNJ Can you copy me (or.....)?
- QNK Transmit message(s) (for.....) to.....
- QNL Your Net frequency is low.
- QNM You are QRMing.....; please stand by.
- QNN Net Control Station is.....(on.....kc.).
- QNO Going out of Net.
- QNP Unable to copy you (or.....)?
- QNQ Send you information "QNC" or May I transmit message "QNC?"
- QNR Answer.....and relay (or receive) traffic.
- QNS Following stations in Net.....
- QNT Leaving Net temporarily (or for..... minutes) or I request to leave Net temporarily, etc.
- QNU.....has traffic for you; await instructions (or QNU QNR).
- QNV Please request.....to QSV.
- QNW Through whom shall I relay message for.....?
- QNX You are excused from Net or I request to be excused.
- QNY Please shift to another frequency (or to.....kc.) to prevent QRMing other Net stations (or to clear traffic with.....).
- QNZ Zero beat your signal with that of the Net Control Station.



**AMATEUR**  
**Fundamental, PR Type Z-2**  
 Frequency Ranges in Kcs.: 3,500 to 4,000 (80M); 7,000 to 7,425 (40M); 8,000 to 8,222 (2M); 8,334 to 9,000 (6M).  
 Rugged. Low drift, fundamental oscillators. High activity and power output. Stands up under maximum crystal currents. Stable, long-lasting;  $\pm 500$  cycles.....\$2.95 Net

(All Z-2 Crystals calibrated with a load of 32 mmfd.)

**Third Overtone, PR Type Z-9A**  
 Hermetically sealed; calibrated 24,000 to 24,666 and 25,000 to 27,000 Kc.,  $\pm 3$  Kc.; .050" pins.....\$3.95 Net

**6 Meters, PR Type Z-9A**  
 Fifth overtone; for operating directly in 6-meter band; hermetically sealed; calibrated 50 to 54 Mc.,  $\pm 15$  Kc.; .050" pins.....\$4.95 Net

**SPECIAL TYPES**  
**Commercial Crystals available from 100 Kc. to 70 Mc. Prices on request.**  
**Type Z-1, Aircraft Z-1, MARS & CAP**  
 8028.5 Kc., .005% \$3.45 Net  
 Official assigned transmitter frequencies in the range. Calibrated to .005%. 1600 to 10000 Kc.....\$3.45 Net

**Type Z-6A, Frequency Standard**  
 To determine band-edge. To keep the VFO and receiver properly calibrated.  
 100 Kc.....\$6.95 Net

**Type 2XP**  
 Suitable for converters, experimental, etc. Same holder dimensions as Type Z-2.  
 1600 to 12000 Kc. (Fund.)  
 $\pm 5$  Kc.....\$3.45 Net  
 12001 to 25000 Kc. (3d Mode)  
 $\pm 10$  Kc.....\$4.45 Net

**Type Z-1, TV Marker Crystals**  
 Channels 2 through 13.....\$6.45 Net  
 4.5 Mc. Inter-carrier, .01%.....\$2.95 Net  
 5.0 Mc. Sig. Generator, .01%.....\$2.95 Net  
 10.7 Mc. FM, IF, .01%.....\$2.95 Net

**VHF Type Z-9R, Aircraft**  
 For Lear, Narco and similar equipment operating in the 121 Mc. region, requiring crystals in 30 Mc. range.  
 Each.....\$4.95 Net

**TYPE Z-9R CITIZENS BAND CLASS "D"**  
 FCC assigned frequencies in megacycles: 26.965, 26.975, 26.985, 27.005, 27.015, 27.025, 27.035, 27.055, 27.065, 27.075, 27.085, 27.105, 27.115, 27.125, 27.135, 27.155, 27.165, 27.175, 27.185, 27.205, 27.215, 27.225, 27.255; calibrated to .005%.....\$2.95 Net

(Be sure to specify manufacturer and model number of equipment)  
**TYPE Z-9R RECEIVER CRYSTALS FOR CITIZENS BAND CLASS "D"**—Specify I.F. frequency, also whether receiver oscillator is above or below transmitter frequency. Calibrated to .005%.....\$2.95 Net  
 (Be sure to specify manufacturer and model number of equipment)

**TYPE Z-9R RADIO CONTROL CLASS "C"**  
 FCC assigned frequencies in megacycles: 26.995, 27.045, 27.095, 27.145, 27.195, 27.255; calibrated to .005%.....\$2.95 Net  
 (Be sure to specify manufacturer and model number of equipment)

**ALL PR CRYSTALS ARE UNCONDITIONALLY GUARANTEED ORDER FROM YOUR JOBBER**

**PETERSEN RADIO CO., INC.**  
 2800 W. BROADWAY  
 COUNCIL BLUFFS, IOWA

# INTERNATIONAL POSTAL RATES

The following postal rates cover QSL cards, first class letters and air mail letters to Countries outside of the United States and Possessions.

First class rates are the rate for the first ounce. If the rate indicated is 11¢, add 7¢ for each additional ounce or fraction; if the rate indicated is 5¢, add 5¢ for each additional ounce or fraction.

Air mail rates are the rate for each half ounce, except where indicated.

International reply coupons of United States issue may be purchased at United States post offices for 15 cents each. Each coupon is exchangeable at a post office in any country for a stamp or stamps representing the international postage on a single rate surface letter. The column marked "RP" shows the number of international reply coupons required to prepay an air mail letter of the first weight unit from the countries indicated to the United States.

COUNTRY	QSL cards	First class	Air mail	RP	COUNTRY	QSL cards	First class	Air mail	RP	COUNTRY	QSL cards	First class	Air mail	RP
ADEN	\$.07	\$.11	\$.25	5	GABON REPUBLIC	.07	.11	.25	2	PAKISTAN	.07	.11	.25	4
AFGHANISTAN	.07	.11	.25	3	GAMBIA	.07	.11	.25	4	PANAMA	.07	.11	.13	4
ALAND ISLANDS	.07	.11	.15	2	GERMANY	.07	.11	.15	2	PAPUA TERRITORY	.07	.11	.25	3
ALBANIA	.07	.11	.15	2	GHANA	.07	.11	.25	4	PARAGUAY	.07	.11	.15	3
ALGERIA	.07	.11	.15	2	GIBRALTAR	.07	.11	.15	2	PERU	.07	.11	.15	3
ANDORRA	.07	.11	.15	2	GILBERT AND ELLICE ISLANDS	.07	.11	.25	5	PHILIPPINE ISLANDS	.07	.11	.25	3
ANGOLA	.07	.11	.25	3	GOA	.07	.11	.25	3	PITCAIRN ISLAND	.07	.11	.25	2
ARGENTINA	.07	.11	.15	3	GREECE	.07	.11	.15	2	POLAND	.07	.11	.15	2
ASCENSION ISLAND	.07	.11	.15	3	GREENLAND	.07	.11	.15	2	PORTUGAL	.07	.11	.15	2
AUSTRALIA	.07	.11	.25	3	GUADALOUPE	.07	.11	.13	2	PORTUGUESE GUINEA	.07	.11	.25	2
AUSTRIA	.07	.11	.15	2	GUATEMALA	.07	.11	.13	2					
AZORES	.07	.11	.15	2	GUINEA, REPUBLIC OF	.07	.11	.25	2					
										REUNION ISLAND	.07	.11	.25	3
BAHAMAS	.07	.11	.13	1	HAITI	.07	.11	.13	5	RHODESIA AND				
BALEARIC ISLANDS	.07	.11	.15	2	HONDURAS	.07	.11	.13	3	NYASALAND	.07	.11	.25	5
BARBADOS	.07	.11	.13	2	HONG KONG	.07	.11	.25	5	RIO DE ORO	.07	.11	.25	8
BECHUANALAND	.07	.11	.25	5	HUNGARY	.07	.11	.15	3	RIO MUNI	.07	.11	.25	8
BELGIUM	.07	.11	.15	2						RWANDA and BURUNDI	.07	.11	.25	3
BERMUDA	.07	.11	.13	2	ICELAND	.07	.11	.15	2	ROMANIA	.07	.11	.15	3
BOLIVIA	.07	.11	.15	2	IFNI	.07	.11	.25	8	RYUKYU ISLANDS	.07	.11	.25	5
BRAZIL	.07	.11	.15	3	INDIA	.07	.11	.25	4					
BRITISH CAMEROONS	.07	.11	.25	4	INDONESIA	.07	.11	.25	4	SAHARA	.07	.11	.25	8
BRITISH GUIANA	.07	.11	.15	2	IRAN	.07	.11	.25	3	ST. HELENA	.07	.11	.25	3
BRITISH HONDURAS	.07	.11	.13	2	IRAQ	.07	.11	.25	2	ST. PIERRE AND				
BRITISH NORTH BORNEO	.07	.11	.25	6	IRELAND	.07	.11	.15	3	MIQUELON	.07	.11	.13	2
BRUNEI	.07	.11	.25	7	ISRAEL	.07	.11	.25	3	SAMOA (WESTERN)	.07	.11	.25	4
BULGARIA	.07	.11	.15	2	ITALY	.07	.11	.15	2	SANTA CRUZ ISLAND	.07	.11	.25	3
BURMA	.07	.11	.25	4	IVORY COAST	.07	.11	.25	2	SARAWAK	.07	.11	.25	4
										SAUDI ARABIA	.07	.11	.25	4
CAMBODIA	.07	.11	.25	3	JAMAICA	.07	.11	.13	2	SENEGAL	.07	.11	.25	2
CAMEROUN	.07	.11	.25	2	JAPAN	.07	.11	.25	2	SEYCHELLES	.07	.11	.25	3
CANADA	.04	.05	.08	2	JORDAN	.07	.11	.25	3	SIERRA LEONE	.07	.11	.25	4
CANARY ISLANDS	.07	.11	.15	2	KENYA & UGANDA	.07	.11	.25	5	SOLOMON ISLANDS	.07	.11	.25	6
CAPE VERDE ISLANDS	.07	.11	.25	3	KOREA	.07	.11	.25	5	SOMALI REPUBLIC	.07	.11	.25	4
CARIBBEAN, BRITISH TERRITORIES IN	.07	.11	.13	2	KUWAIT	.07	.11	.25	4	SOMALILAND				
CAYMAN ISLANDS	.07	.11	.13	3	LABUAN	.07	.11	.25	6	PROTECTORATE	.07	.11	.25	4
CENTRAL AFRICAN REPUB.	.07	.11	.25	2	LAOS	.07	.11	.25	3	SOUTH AFRICA, Rep. of	.07	.11	.25	5
CEYLON	.07	.11	.25	5	LATVIA	.07	.11	.25	3	SOUTH-WEST AFRICA	.07	.11	.25	5
CHAD	.07	.11	.25	2	LEBANON	.07	.11	.25	3	SPAIN	.07	.11	.15	2
CHILE	.07	.11	.15	4	LEEWARD ISLANDS	.07	.11	.13	3	SUDAN	.07	.11	.25	3
CHINA, REPUBLIC OF	.07	.11	.25	3	LIBERIA	.07	.11	.25	5	SURINAM	.07	.11	.15	1
CHINA (CONTINENTAL)	.07	.11	.25	3	LIBYA	.07	.11	.15	2	SWEDEN	.07	.11	.15	2
COLOMBIA	.07	.11	.15	3	LITHUANIA	.07	.11	.25	2	SWITZERLAND	.07	.11	.15	2
COMORO ISLANDS	.07	.11	.25	3	LUXEMBOURG	.07	.11	.15	2	SYRIA	.07	.11	.15	3
CONGO (BRAZZAVILLE AND LEOPOLDVILLE)	.07	.11	.25	2	MACAO	.07	.11	.25	3					
CORSICA	.07	.11	.15	2	MADEIRA ISLANDS	.07	.11	.15	2	TANGANYIKA	.07	.11	.25	5
COSTA RICA	.07	.11	.13	2	MALAGASY REP. (MADAGASCAR)	.07	.11	.25	3	TASMANIA	.07	.11	.25	3
CUBA	.07	.11	.13	4	MALAYA	.07	.11	.25	5	THAILAND	.07	.11	.25	3
CYPRUS	.07	.11	.25	3	MALI	.07	.11	.25	2	TIMOR	.07	.11	.25	4
CZECHOSLOVAKIA	.07	.11	.15	3	MALTA	.07	.11	.15	3	TOGO	.07	.11	.25	2
					MARTINIQUE	.07	.11	.13	2	TONGA (FRIENDLY) ISLANDS	.07	.11	.25	3
DAHOMY	.07	.11	.25	2	MAURITANIA	.07	.11	.25	2	TRINIDAD AND TOBAGO	.07	.11	.13	3
DENMARK	.07	.11	.15	2	MAURITIUS	.07	.11	.25	3	TRISTAN DE CUNHA	.07	.11	.25	5
DOMINICAN REPUBLIC	.07	.11	.13	2	MEXICO	.04	.05	.08	2	TUNISIA	.07	.11	.15	2
					MOROCCO	.07	.11	.15	2	TURKEY	.07	.11	.15	3
ECUADOR	.07	.11	.15	3	MOZAMBIQUE	.07	.11	.25	3	TURKS ISLAND	.07	.11	.13	2
EGYPT	.07	.11	.15	2										
EL SALVADOR	.07	.11	.13	2	NAURA ISLANDS	.07	.11	.25	3	U.S.S.R.	.07	.11	.25	5
ENGLAND	.07	.11	.15	3	NEPAL	.07	.11	.25	6	UPPER VOLTA	.07	.11	.25	2
ERITREA	.07	.11	.25	3	NETHERLANDS	.07	.11	.15	2	URUGUAY	.07	.11	.15	5
ESTONIA	.07	.11	.25	3	NETHERLANDS ANTILLES	.07	.11	.13	1					
ETHIOPIA	.07	.11	.25	3	NETHERLANDS NEW GUINEA	.07	.11	.25	3	VATICAN CITY	.07	.11	.15	2
					NEW CALEDONIA	.07	.11	.25	2	VENEZUELA	.07	.11	.15	2
FAEROE ISLANDS	.07	.11	.15	2	NEW GUINEA, TERRITORY OF	.07	.11	.25	3	VIETNAM	.07	.11	.25	3
FALKLAND ISLANDS	.07	.11	.15	3	NEW HEBRIDES	.07	.11	.25	3					
FJI ISLANDS	.07	.11	.25	3	NEW ZEALAND	.07	.11	.25	3	WINDWARD ISLANDS	.07	.11	.13	3
FINLAND	.07	.11	.15	2	NICARAGUA	.07	.11	.13	4					
FRANCE	.07	.11	.15	2	NIGER	.07	.11	.25	2	YEMEN	.07	.11	.25	5
FRENCH GUIANA	.07	.11	.15	2	NIGERIA	.07	.11	.25	4	YUGOSLAVIA	.07	.11	.15	3
FRENCH OCEANIA	.07	.11	.25	2	NORWAY	.07	.11	.15	2					
FRENCH SOMALILAND	.07	.11	.25	2						ZANZIBAR	.07	.11	.25	5

\*Rate per ounce.

QSL cards and Aerogrammes (air letter sheets) may be sent to any country in the world by air mail for 11¢ (exception, QSL cards to Canada and Mexico, 6¢).

These rates include all revisions up to press time of this issue.



# CANCER'S DANGER SIGNALS CAN BE YOUR SAFETY SIGNALS



LEARN TO RECOGNIZE THE SEVEN DANGER  
SIGNALS THAT MAY MEAN CANCER

**1** Unusual bleeding or discharge; **2** A lump or thickening in the breast or elsewhere; **3** A sore that does not heal; **4** Change in bowel or bladder habits; **5** Hoarseness or cough; **6** Indigestion or difficulty in swallowing; **7** Change in a wart or mole.

If one of these symptoms lasts longer than two weeks, see your doctor at once. A danger signal can help save your life, if you act promptly!

AMERICAN CANCER SOCIETY

This space contributed by the publisher



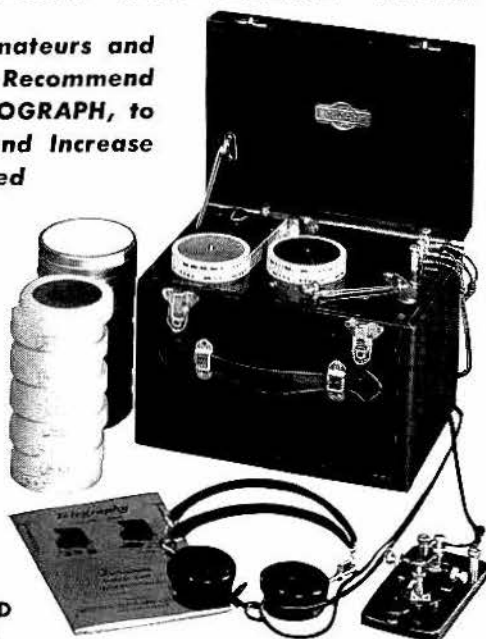
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6-63

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CHICAGO 39, ILLINOIS, U.S.A.

Compiled by the National Bureau of Standards

Not all countries follow the International Time Zone System, but some use the time of some principal city as a standard and others have no standard time. The different time zones of the world are numbered east and west of Greenwich. The zone number when added or subtracted, as shown in the following table, from the time of the zone gives the corresponding Greenwich time. Thus zones to the east have faster time than Greenwich and are indicated as minus (—), while those to the west have slower time and are indicated as plus (+).

‡No definite standard time used.  
§1 hour or 2 hours fast, fixed annually.



# SAN FRANCISCO, CALIF.

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The table below shows the great circle bearing in degrees from the point indicated above to countries throughout the world having licensed radio amateurs. Where cities are shown the bearing to the nearest degree is given. These bearings were compiled from information supplied by the U. S. Coast and Geodetic Survey.

PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	
AC3	SIKKIM	331	KM6	MIDWAY ISLAND	275	VP5	JAMAICA	105	
AC4	TIBET, LHASA	331	KP4	PUERTO RICO	96		TURKS & CAICOS IS.	95	
AC5	BHUTAN	329	KR6,B	RYUKYU IS., OKINAWA	302	VP6	BARBADOS	97	
AP	PAKISTAN, KARACHI	351	KS4	SWAN ISLAND	108	VP7	BAHAMA IS.	97	
BV	FORMOSA, TAIPEI	305	KS6	U S SAMOA	230	VP8	FALKLAND IS.	145	
BY,C	CHINA, CHUNGKING	319	KV4	VIRGIN IS.	94		SOUTH GEORGIA ISLAND	140	
	PEKING	320	KW6	WAKE ISLAND	275		SOUTH ORKNEY IS.	149	
	SHANGHAI	310	KX6	MARSHALL IS.	263	VP9	BERMUDA IS.	79	
CE	CHILE, SANTIAGO	139	KZ5	CANAL ZONE	116	VO1	ZANZIBAR	34	
CE0A	EASTER ISLAND	167	LA	NORWAY, OSLO	22	VO2	NORTHERN RHODESIA, LUSAKA	58	
CE0Z	JUAN FERNANDEZ IS.	145		SVALBARD IS.	9	VO4	KENYA, NAIROBI	34	
CM,CO	CUBA, HAVANA	101		JAN MAYEN ISLAND	20	VO8	CHAGOS IS.	337	
CN	MOROCCO, CASABLANCA	49	LU	ARGENTINA, BUENOS AIRES	132		MAURITIUS & RODRIGUEZ IS.	9	
CP	BOLIVIA, LA PAZ	126	LX	LUXEMBOURG	32	V29	SEYCHELLES	5	
CR4	CAPE VERDE IS.	73	LZ	BULGARIA, SOFIA	25	VR1	GILBERT, ELLICE & OCEAN IS.	255	
CR5	PORTUGUESE GUINEA	71	MP4	MUSCAT & OMAN, MASOAT	8	VR2	FIJI IS.	237	
CR6	ANGOLA, NOVA LISBOA	68	OA	PERU, LIMA	130	VR3	LINE IS.	235	
CR7	MOZAMBIQUE, LOURENCO MARQUES	69	OD5	LEBANON, BEIRUT	20	VR4	SOLOMON IS.	257	
	MOZAMBIQUE	40	OE	AUSTRIA, VIENNA	28	VR5	TONGA, FRIENDLY IS.	231	
CR8	GOA, PORTUGUESE INDIA	342	OH	FINLAND, HELSINKI	16	VR6	PITCAIRN ISLAND	187	
CR8	TIMOR ISLAND, PORTUGAL	275	OH0	ALAND IS.	18	VS1	SINGAPORE	301	
CR9	MACAO	308	OK	CZECHOSLOVAKIA, PRAGUE	26	VS4	SARAWAK	294	
CT1	PORTUGAL, LISBON	47	ON	BELGIUM, BRUSSELS	31	VS5	BRUNEI	296	
CT2	AZORES IS.	56	OX	GREENLAND, GODTHAAR	34	VS6	HONG KONG	310	
CT3	MADEIRA IS.	56	OY	FAEROES IS.	28	VS9	ADEN, ADFN	15	
CX	URUGUAY, MONTEVIDEO	131	OZ	DENMARK, COPENHAGEN	24	VU	INDIA, BOMBAY	343	
DJ,DL	WEST GERMAN FEDERAL REP, BONN	030	PA,P1	NETHERLANDS, AMSTERDAM	30		CALCUTTA	329	
DM	F. GERMAN DEMOCRATIC REP, BERLIN	026	PJ	NETHERLANDS ANTILLES	103		NEW DELHI	342	
DU	PHILIPPINE IS., MANILA	298	PJ2M	SINT MAARTEN	94	VU4	LACCADIVE IS.	342	
EA	SPAIN, MADRID	42	PK1,2,3	JAVA, BATAVIA	291	VU5	ANDAMAN & NICOBAR IS.	320	
EA6	BALEARIC IS.	40	PK4	SUMATRA	300	XE	MEXICO, MEXICO CITY	126	
EA8	CANARY IS.	58	PK5	BORNEO	290	XE4	REVILLA GIGEDO IS.	149	
EA9	SPANISH SAHARA, IFNI, RIO DE ORO	47	PK6	CELEBES IS.	285	XW8	LAOS	316	
EA0	SPANISH GUINEA, RIO MUNI	58	PX	ANDORRA	39	XZ	BURMA, RANGOON	319	
EI	IRELAND, DUBLIN	34	PY	BRAZIL, BRASILIA	112	YA	AFGHANISTAN, KANDAHAR	3	
EL	LIBERIA, MONROVIA	72		RIO DE JANEIRO	115	Y1	IRAQ, BAGHDAD	12	
EP,EO	IRAN, TEHRAN	6		NATAL	97	YJ	NEW HEBRIDES, VILLA	243	
ET2	ERITREA, ASMARA	27	PY0	TRINIDADE & MARTIN VAZ IS.	104	YK	SYRIA	17	
ET3	ETHIOPIA, ADDIS ABABA	25	PZ	SURINAM, NETHERLANDS GUIANA	100	YN	NICARAGUA, MANAGUA	119	
F	FRANCE, PARIS	33	SM,SL	SWEDEN, STOCKHOLM	19	YO	RUMANIA, BUCHAREST	23	
FA	ALGERIA, ALGIRS	41	SP	POLAND, WARSAW	22	YS	EL SALVADOR, SAN SALVADOR	121	
FB8	AMSTERDAM AND ST. PAUL IS.	264	ST	SUDAN, KHARTOUM	30	YT,YU	YUGOSLAVIA, BELGRADE	26	
	KERGUELEN IS.	212	SU	EGYPT, CAIRO	74	YV	VENEZUELA, CARACAS	104	
FC	CORSICA	34	SV	GREECE, ATHENS	27	ZA	ALBANIA, TIRANA	29	
FES	CAMEROON, YAOUNDE	55	SV5	DODECANESE IS.	25	ZB1	MALTA	35	
FG7	GUADLOUPE	95	TA	TURKEY, ANKARA	20	ZB2	GIBRALTAR	46	
FH8	COMORO IS.	30	TF	ICELAND, REYKJAVIK	30	ZC5	BRITISH NORTH BORNEO	294	
FK8	NEW CALEDONIA, NOUMEA	240	TG	GUATEMALA, GUATEMALA CITY	121	ZD3	GAMBIA	71	
FL8	FRENCH SOMALILAND, DJIBOUTI	19	TI	COSTA RICA	119	ZD6	NYASALAND, ZOMBA	50	
FM7	MARTINIQUE	96	TL8	CENTRAL AFRICAN REP, BANGUI	50	ZD7	SAINT HELENA	89	
FO8	FRENCH OCEANIA, TAHITI	209	TN8	REPUBLIC OF CONGO, BRAZZAVILLE	50	ZD8	ASCENSION ISLAND	87	
	CLIPPERTON ISLAND	153	TR8	GABON REPUBLIC, LIBREVILLE	61	ZD9	TRISTAN DA CUNHA IS.	114	
FR8	MIQUELON & ST PIERRE IS.	57	TT8	CHAD REPUBLIC, FT. LAMY	47	ZE	SOUTHERN RHODESIA, SALISBURY	58	
FR7	REUNION ISLAND	9	TU2	IVORY COAST, ABIDJAN	67	ZK1	COOK IS.	223	
F57	SAINT MARTIN ISLAND	94	TZ	MALI REPUBLIC, BAMAKO	65	ZK2	NIUE	228	
F08	NEW HEBRIDES, VILA	243	UA1	SOVIET UNION, MOSCOW	22	ZL1	NEW ZEALAND, AUCKLAND	226	
FW8	WALLIS & FUTUNA IS.	236	UA9,0	ASIATIC RUSSIAN S.F.S.R.	335	ZL2	WELLINGTON	224	
FY7	FRENCH GUIANA, CAYENNE	99	UB5	UKRAINE	16	ZL3	CHRISTCHURCH	223	
G	ENGLAND, LONDON	33	UC2	WHITE RUSSIAN S.S.R.	18	ZL4	DUNEDIN	222	
GC	CHANNEL IS.	36	UD6	AZERRAIJAN	8	ZP	PARAGUAY, ASUNCION	125	
GD	ISLE OF MAN	33	UF6	GEORGIA	13	Z5	REP. OF SOUTH AFRICA, CAPE TOWN	95	
GI	NORTHERN IRELAND, BELFAST	34	UG6	ARMENIA	10		DURBAN	79	
GM	SCOTLAND, GLASGOW	31	UH8	TURKMEN	3		JOHANNESBURG	74	
GW	WALES	34	UI8	UZBEK	354	Z52	PRINCE EDWARD & MARION IS.	128	
HA	HUNGARY, BUDAPEST	26	UJ9	TADZHIK	350	Z53	SOUTHWEST AFRICA, WINDHOEK	79	
HB	SWITZERLAND, BERN	32	UL7	KAZAKH	350	Z57	SWAZILAND	72	
HC	ECUADOR, QUITO	123	UM8	KIRGHIZ	351	Z58	BASUTOLAND	81	
HC8	GALAPAGOS IS.	137	UN1	KARELO-FINNISH REPUBLIC	12	Z59	BECHUANALAND, MAFIKING	71	
HE9L	LIECHTENSTEIN	31	UO5	MOLDAVIA	21	3A2	MONACO	35	
HH	HAITI, PORT-AU-PRINCE	100	UP	LITHUANIA	19	3V8	TUNISIA, TUNIS	37	
H1	DOMINICAN REP, SANTO DOMINGO	98	UQ	LATVIA	18	3W8	VIETNAM, SAIGON	305	
HK	COLOMBIA, BOGOTA	115	UR	ESTONIA	17	457	CEYLON, COLOMBO	330	
HK0	SAN ANDRES & PROVIDENCIA IS.	113	VE1	CANADA, HALIFAX	62	441	YEMEN	16	
HM,HL9	KOREA, SEOUL	311	VE2	MONTREAL	62	4X4	ISRAEL	21	
HP	PANAMA	116	VE3	TORONTO	66	5A	LIBYA, TRIPOLI	37	
HR	HONDURAS, TEGUCIGALPA	118	VE4	WINNIPEG	48	5B4	CYPRUS	21	
HS	THAILAND, BANGKOK	312	VE5	SASKATOON	33	5H3	TANGANYIKA, DAR ES SALAAM	35	
HV	VATICAN CITY	32	VE6	EDMONTON	18	5N2	NIGERIA, LAGOS	62	
HZ	SAUDI ARABIA, MECCA	19	VE7	VANCOUVER	359	5R8	MALAGASY REPUBLIC, TANANARIVE	29	
I	ITALY, ROME	32	VE8	FORT NELSON	360	5T5	MAURITANIA, NOUAKCHOTT	66	
	TRIESTE	29	VK1	AUSTRALIA, CANBERRA	240	5U7	NIGER, NIAMFY	57	
IS	SARDINIA	35	VK2	SYDNEY	240	5V4	TOGO	62	
IT	SICILY	33	VK3	MELBOURNE	239	5W1	WESTERN SAMOA	237	
JA	JAPAN, TOKYO	303	VK4	BRISBANE	244	5X5	UGANDA	38	
JT1	MONGOLIA, ULAN BATOR	329	VK5	ADELAIDE	60	60	SOMALI REPUBLIC, MOGADISHU	19	
JY	JORDAN	19	VK6	PERTH	259	6W8	SENEGAL, DAKAR	70	
JZ0	NETHERLANDS NEW GUINEA	273	VK7	TASMANIA, HOBART	234	7G1	REPUBLIC OF GUINEA, CONAKRY	71	
KB6	BAKER ISLAND	246	VK8	DARWIN	268	9A1	SAN MARINO	31	
KC4	NAVASSA ISLAND	102	VK9	NORFOLK ISLAND	235	9G1	GHANA, ACCRA	66	
KC6	CAROLINE IS.	275	VK0	NEW GUINEA, PAPUA, PORT MORESBY	266	9K2	KUWAIT	9	
KG4	GUANTANAMO BAY, CUBA	100		HEARD ISLAND	209	9L1	SIERRA LEONE, FREETOWN	72	
KG6	MARIANAS IS., GUAM	287		MACQUARIE ISLAND	218	9M2	FEDERATION OF MALAYA	306	
KG61	VOLCANO IS.	293	VO1	NEWFOUNDLAND, ST JOHNS	55	9N1	NEPAL, KATHMANDU	334	
KG65	SAIPAN ISLAND	282	VO2	LABRADOR, HOPEDALE	46	9Q5	REP. OF THE CONGO, LEOPOLDVILLE	61	
KH6	HAWAIIAN IS., HONOLULU	252	VP1	BRITISH HONDURAS	116		ELISABETHVILLE	55	
KL7	ALASKA, ANCHORAGE	333	VP2	ANTIGUA	94		STANLEYVILLE	47	
	FAIRBANKS	340	VP3	BRITISH GUIANA, GEORGETOWN	102	9Q5	RWANDA AND BURUNDI	43	
			VP4	TRINIDAD & TOBAGO IS.	100				

# Great Circle Chart of the World Centered on THE UNITED STATES



To find the great circle bearing to any point in the world from the center of the United States, draw a straight line from the star and note the reading in degrees on the outer scale. The bar scale at the bottom of the chart can be used to determine the distance in statute miles. For bearings to the nearest degree reference is invited to the table on the opposite Page. The outlines of this chart were prepared by the U.S. Coast and Geodetic Survey.



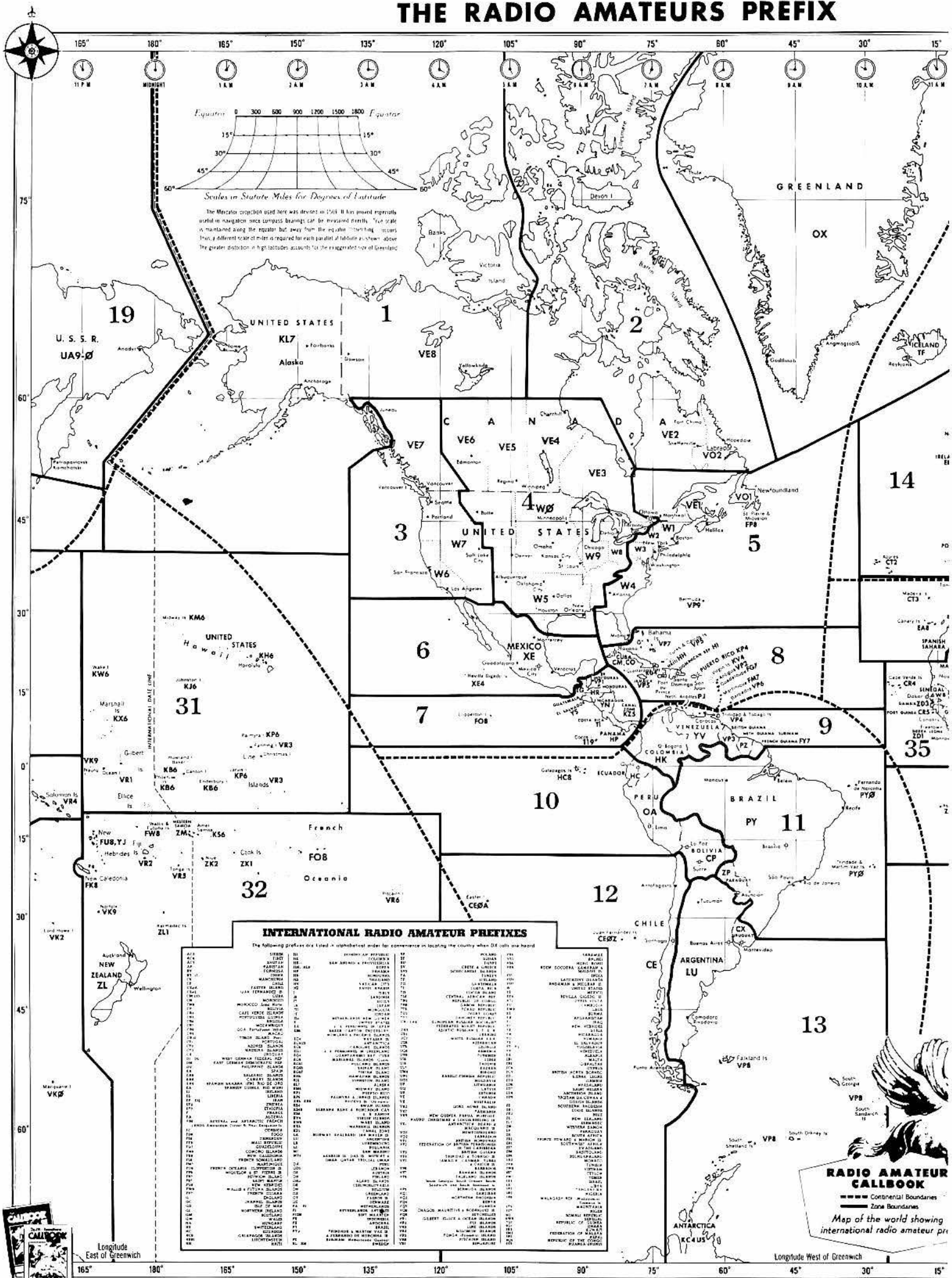
# THE GEOGRAPHICAL CENTER OF THE UNITED STATES

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The table below shows the great circle bearing in degrees from the point indicated above to countries throughout the world having licensed radio amateurs. Where cities are shown the bearing to the nearest degree is given. These bearings were compiled from information supplied by the U. S. Coast and Geodetic Survey.

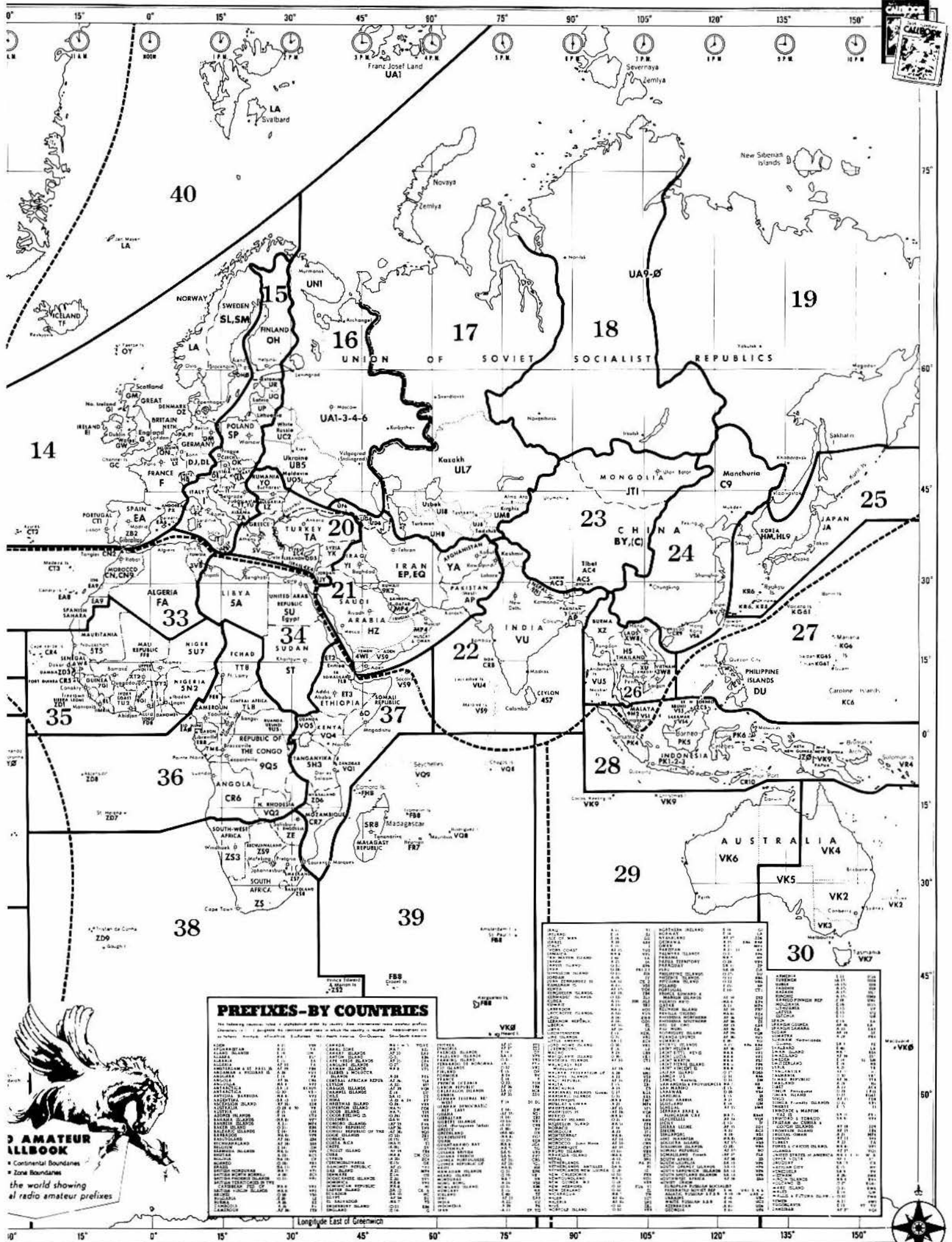
PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	
AC3	SIKKIM	353	KM6	MIDWAY ISLAND	286	VP5	JAMAICA	133	
AC4	TIBET, LHASA	351	KP4	PUERTO RICO	119		TURKS & CAICOS IS.	120	
AC5	BHUTAN	351	KR6,8	RYUKYU IS., OKINAWA	319	VP6	BARBADOS	117	
AP	PAKISTAN, KARACHI	14	KS4	SWAN ISLAND	146	VP7	BAHAMA IS.	123	
BV	FORMOSA, TAIPEI	323	KS6	U S SAMOA	248	VP8	FALKLAND IS.	156	
BY,C	CHINA, CHUNGKING	337	KV4	VIRGIN IS.	117		SOUTH GEORGIA ISLAND	147	
	PEKING	334	KW6	WAKE ISLAND	288		SOUTH ORKNEY IS.	155	
	SHANGHAI	326	KX6	MARSHALL IS.	280	VP9	BERMUDA IS.	95	
CE	CHILE, SANTIAGO	156	KZ5	CANAL ZONE	145	VQ1	ZANZIBAR	60	
CE0A	EASTER ISLAND	190	LA	NORWAY, OSLO	32	VQ2	NORTHERN RHODESIA, LUSAKA	78	
CE0Z	JUAN FERNANDEZ IS.	163		SVALBARD IS.	13	VQ4	KENYA, NAIROBI	58	
CM,CO	CUBA, HAVANA	136		JAN MAYEN ISLAND	24	VQ8	CHAGOS IS.	17	
CN	MOROCCO, CASABLANCA	62	LU	ARGENTINA, BUENOS AIRES	148		MAURITIUS & RODRIGUEZ IS.	53	
CP	BOLIVIA, LA PAZ	147	LX	LUXEMBOURG	42	VQ9	SEYCHELLES	40	
CR4	CAPE VERDE IS.	87	LZ	BULGARIA, SOFIA	39	VR1	GILBERT, ELLICE & OCEAN IS.	270	
CR5	PORTUGUESE GUINEA	85	MP4	MUSCAT & OMAN, MASQAT	23	VR2	FIJI IS.	252	
CR6	ANGOLA, NOVA LISBOA	84	OA	PERU, LIMA	154	VR3	LINE IS.	253	
CR7	MOZAMBIQUE, LOURENCO MARQUES	86	OD5	LEBANON, BEIRUT	37	VR4	SOLOMON IS.	270	
	MOZAMBIQUE	67	OE	AUSTRIA, VIENNA	39	VR5	TONGA, FRIENDLY IS.	245	
CR8	GOA, PORTUGUESE INDIA	9	OH	FINLAND, HELSINKI	26	VR6	PITCAIRN ISLAND	210	
CR8	TIMOR ISLAND, PORTUGAL	296	OH0	ALAND IS.	28	VS1	SINGAPORE	728	
CR9	MACAO	328	OK	CZECHOSLOVAKIA, PRAGUE	38	VS4	SARAWAK	320	
CT1	PORTUGAL, LISBON	59	ON	BELGIUM, BRUSSELS	42	VS5	BRUNEI	317	
CT2	AZORES IS.	67	OX	GREENLAND, GODTHAAB	32	VS6	HONG KONG	328	
CT3	MADEIRA IS.	68	OY	FAEROES IS.	35	VS9	ADEN, ADEN	41	
CX	URUGUAY, MONTEVIDEO	146	OZ	DENMARK, COPENHAGEN	34	VU	INDIA, BOMBAY	9	
DJ,OL	WEST GERMAN FEDERAL REP. BONN	41	PA,PI	NETHERLANDS, AMSTERDAM	40		CALCUTTA	353	
DM	E. GERMAN DEMOCRATIC REP. BERLIN	37	PJ	NETHERLANDS ANTILLES	128		NEW DELHI	4	
DU	PHILIPPINE IS., MANILA	317	PJ2M	SINT MAARTEN	115	VU4	LACCADIVE IS.	10	
EA	SPAIN, MADRID	55	PK1,2,3	JAVA, BATAVIA	319	VU5	ANDAMAN, NICOBAR IS.	346	
EA6	BALEARIC IS.	53	PK4	SUMATRA	326	XE	MEXICO, MEXICO CITY	182	
EA8	CANARY IS.	70	PK5	BORNEO	312	XE4	REVILLA GIGEDO IS.	211	
EA9	SPANISH SAHARA, IFNI, RIO DE ORO	70	PK6	CELEBES IS.	307	XW8	LAOS	338	
EA0	SPANISH GUINEA, RIO MUNI	75	PX	ANDORRA	50	XZ	BURMA, RANGOON	343	
EI	IRELAND, DUBLIN	43	PY	BRAZIL, BRASILIA	129	YA	AFGHANISTAN, KANDAHAR	14	
EL	LIBERIA, MONROVIA	87		RIO DE JANEIRO	130	YI	IRAQ, BAGHDAD	31	
EP,FQ	IRAN, TEHRAN	24		NATAL	112	YJ	NEW HEBRIDES, VILLA	261	
ET2	ERITREA, ASMAR	45	PY2	TRINIDADE MARTIN VAZ IS.	118	YK	SYRIA	34	
ET3	ETHIOPIA, ADDIS ABABA	49	PZ	SURINAM, NETHERLANDS GUIANA	119	YN	NICARAGUA, MANAGUA	155	
F	FRANCE, PARIS	44	SM,SL	SWEDEN, STOCKHOLM	29	YO	ROMANIA, BUCHAREST	36	
FA	ALGERIA, ALGIERS	54	SP	POLAND, WARSAW	34	YS	EL SALVADOR, SAN SALVADOR	160	
FBR	AMSTERDAM AND ST. PAUL IS.	58	ST	SUDAN, KHARTOUM	50	YT,YU	YUGOSLAVIA, BELGRADE	39	
	KERGUELEN IS.	143	SU	EGYPT, CAIRO	42	YV	VENEZUELA, CARACAS	127	
FC	CORSICA	47	SV	GREECE, ATHENS	42	ZA	ALBANIA, TIRANA	42	
FEB	CAMEROON, YAOUNDE	74	SV5	DODECANESE IS.	41	ZB1	MALTA	49	
FG7	GUADELOUPE	116	TA	TURKEY, ANKARA	35	ZB2	GIBRALTAR	59	
FH8	COMORO IS.	61	TF	ICELAND, REYKJAVIK	34	ZC5	BRITISH NORTH BORNEO	315	
FK8	NEW CALEDONIA, NOUMEA	255	TG	GUATEMALA, GUATEMALA CITY	162	ZD3	GAMBIA	85	
FL8	FRENCH SOMALILAND, DJIBOUTI	43	TI	COSTA RICA	153	ZD6	NYASALAND, ZOMBA	72	
FM7	MARTINIQUE	117	TL8	CENTRAL AFRICAN REP., BANGUI	68	ZD7	SAINT HELENA	101	
FO8	FRENCH OCEANIA, TAHITI	230	TN9	REPUBLIC OF CONGO, BRAZZAVILLE	78	ZD8	ASCENSION ISLAND	100	
	CLIPPERTON ISLAND	201	TR8	GABON REPUBLIC, LIBREVILLE	78	ZD9	TRISTAN DA CUNHA IS.	122	
FPB	MIDJELON ST PIERRE IS.	63	TT8	CHAD REPUBLIC, FT. LAMY	65	ZE	SOUTHERN RHODESIA, SALISBURY	78	
FR7	REUNION ISLAND	58	TU2	IVORY COAST, ABIDJAN	83	ZK1	COOK IS.	235	
FS7	SAINT MARTIN ISLAND	115	TZ	MALI REPUBLIC, BAKO	80	ZK2	NIUE	244	
FU8	NEW HEBRIDES, VILA	258	UA1	SOVIET UNION, MOSCOW	23	ZL1	NEW ZEALAND, AUCKLAND	238	
FW8	WALLIS & FUTUNA IS.	252	UA9,8	ASIATIC RUSSIAN S.F.S.R.	346	ZL2	WELLINGTON	235	
FY7	FRENCH GUIANA, CAYENNE	118	UB5	UKRAINE	30	ZL3	CHRISTCHURCH	233	
G	ENGLAND, LONDON	43	UC2	WHITE RUSSIAN S.S.R.	30	ZL4	DUNEDIN	232	
GC	CHANNEL IS.	46	UD6	AZERBAIJAN	26	ZP	PARAGUAY, ASUNCION	142	
GD	ISLE OF MAN	42	UF6	GEORGIA	26	ZS	REP. OF SOUTH AFRICA, CAPE TOWN	104	
GI	NORTHERN IRELAND, BELFAST	42	UG6	ARMENIA	27		DURBAN	92	
GM	SCOTLAND, GLASGOW	40	UH8	TURKMEN	18		JOHANNESBURG	90	
GW	WALES	44	UI8	UZBEK	11	ZS2	PRINCE EDWARD & MARION IS.	117	
HA	HUNGARY, BUDAPEST	38	UJ8	TADZHIK	10	ZS3	SOUTHWEST AFRICA, WINDHOEK	93	
HB	SWITZERLAND, BERN	44	UL7	KAZAKH	13	ZS7	SWAZILAND	88	
HC	ECUADOR, QUITO	150	UM8	KIRGHIZ	5	ZS8	BASUTOLAND	94	
HCR	GALAPAGOS IS.	166	UN1	KARELO-FINNISH REPUBLIC	19	ZS9	BECHUANALAND, MAFEKING	91	
HE9L	LIECHTENSTEIN	43	UO5	MOLDAVIA	33	3A2	MONACO	47	
HH	HAITI, PORT-AU-PRINCE	126	UP	LITHUANIA	30	3VB	TUNISIA, TUNIS	50	
HI	DOMINICAN REP., SANTO DOMINGO	122	UQ	LATVIA	29	3WB	VIETNAM, SAIGON	329	
HK	COLOMBIA, BOGOTA	141	UR	ESTONIA	27	457	CEYLON, COLOMBO	2	
HK0	SAN ANDRES & PROVIDENCIA IS.	146	VE1	CANADA, HALIFAX	68	4W1	YEMEN	40	
HM,HL9	KOREA, SEOUL	325	VE2	MONTREAL	65	4X4	ISRAEL	38	
HP	PANAMA	146	VE3	TORONTO	69	5A	LIBYA, TRIPOLI	52	
HR	HONDURAS, TEGUCIGALPA	156	VE4	WINNIPEG	5	5B4	CYPRUS	38	
HS	THAILAND, BANGKOK	338	VE5	SASKATOON	338	5H3	TANGANYIKA, DAR ES SALAAM	60	
HV	VATICAN CITY	45	VE6	EDMONTON	329	5N2	NIGERIA, LAGOS	77	
HZ	SAUDI ARABIA, MECCA	40	VE7	VANCOUVER	307	5R8	MALAGASY REPUBLIC, TANANARIVE	64	
I	ITALY, ROME	45	VE8	FORT NELSON	329	5T5	MAURITANIA, NOUAKCHOTT	80	
	TRIESTE	42	VK1	AUSTRALIA, CANBERRA	252	5U7	NIGER, NIAMEY	73	
IS	SARDINIA	49	VK2	SYDNEY	253	5V4	TOGO	79	
IT	SICILY	48	VK3	MELBOURNE	251	5W1	WESTERN SAMOA	249	
JA	JAPAN, TOKYO	316	VK4	BRISBANE	258	5X5	UGANDA	60	
JT1	MONGOLIA, ULAN PATOR	343	VK5	ADELAIDE	257	60	SOMALI REPUBLIC, MOGADISHU	47	
JY	JORDAN	38	VK6	PERTH	275	6W8	SENEGAL, DAKAR	84	
JZ0	NETHERLANDS NEW GUINEA	289	VK7	TASMANIA, HOBART	244	7G1	REPUBLIC OF GUINEA, CONAKRY	86	
KB6	BAKER ISLAND	262	VK8	DARWIN	288	9A1	SAN MARINO	44	
KC4	NAVASSA ISLAND	130	VK9	NORFOLK ISLAND	249	9G1	GHANA, ACCRA	80	
KC6	CAROLINE IS.	294		NEW GUINEA, PAPUA, PORT MORESBY	278	9K2	KUWAIT	30	
KG4	GUANTANAMO BAY, CUBA	128	VK0	HEARD ISLAND	161	9L1	SIERRA LEONE, FREETOWN	86	
KG6	MARIANAS IS., GUAM	298		MACQUARIE ISLAND	226	9M2	FEDERATION OF MALAYA	333	
KG6I	VOLCANO IS.	308	VO1	NEWFOUNDLAND, ST. JOHNS	61	9N1	NEPAL, KATHMANOU	356	
KG6S	SAIPAN ISLAND	298	VO2	LABRADOR, HOPEDALE	45	9Q5	REP. OF THE CONGO, LEOPOLDVILLE	78	
KH6	HAWAIIAN IS., HONOLULU	268	VP1	BRITISH HONDURAS	155		ELISABETHVILLE	75	
KL7	ALASKA, ANCHORAGE	322	VP2	ANTIGUA	115		STANLEYVILLE	66	
	FAIRBANKS	328	VP3	BRITISH GUIANA, GEORGETOWN	121	9U5	RWANDA AND BURUNDI	65	
			VP4	TRINIDAD TOBAGO IS.	121				

## THE RADIO AMATEURS PREFIX





## MAP OF THE WORLD



# INTERNATIONAL "Q" SIGNALS

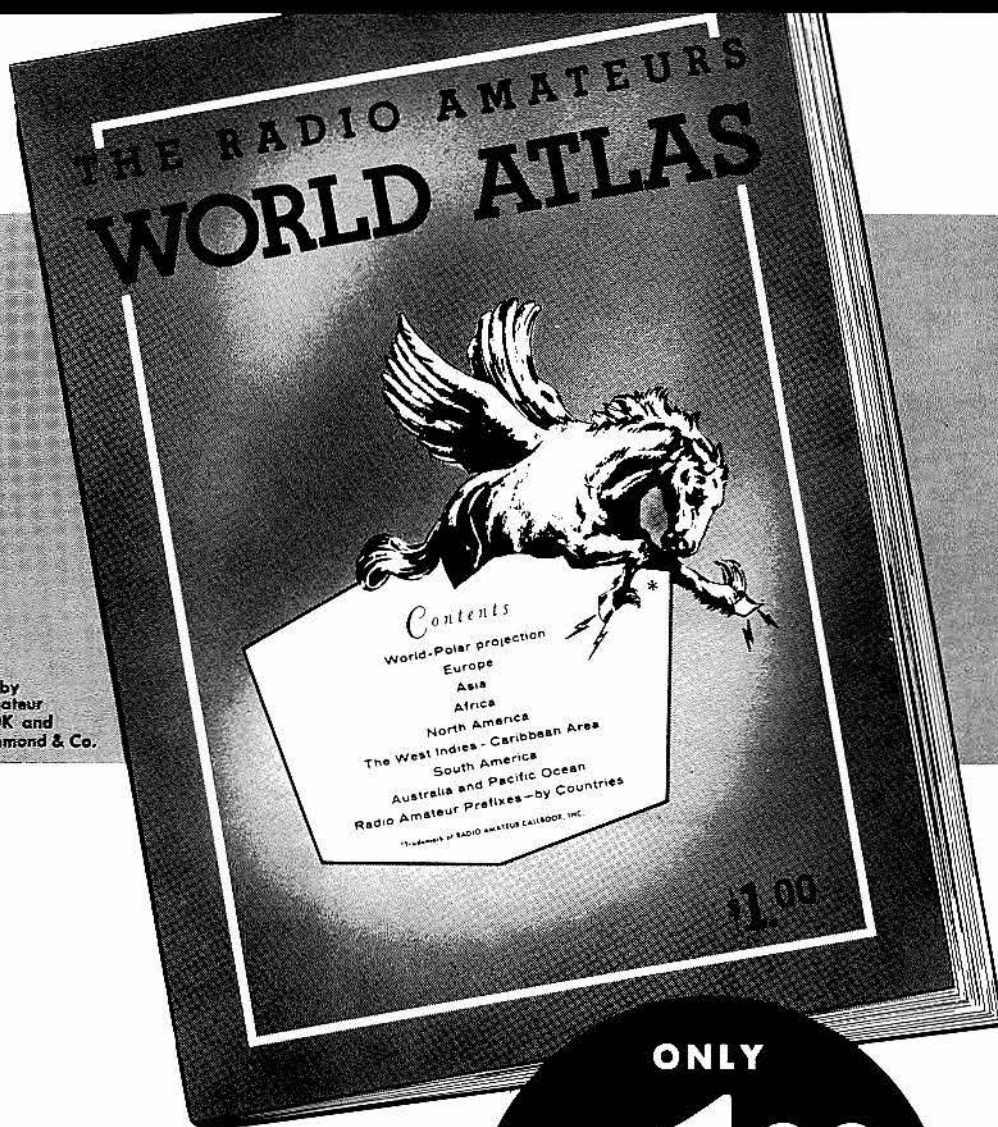
Abbreviation	Question	Answer or Advice	Abbreviation	Question	Answer or Advice
QRA	What is the name of your station?	The name of my station is . . .	QSZ	Will you listen to . . . [call sign(s)] on . . . kc/s (or Mc/s)?	I am listening to . . . [call sign(s)] on . . . kc/s (or Mc/s).
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles (or kilometres)	QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency [or on . . . kc/s (or Mc/s)].
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .	QSZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).
QRG	Will you tell me my exact frequency or that of . . . ?	Your exact frequency (or that of . . . is . . . kc/s (or Mc/s).	QTA	Shall I cancel telegram number . . . as if it had not been sent?	Cancel telegram number . . . as if it had not been sent.
QRH	Does my frequency vary?	Your frequency varies.	QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QRI	How is the tone of my transmission?	The tone of your transmission is . . . (1. Good; 2. Variable; 3. Bad).	QTC	How many telegrams have you to send?	I have . . . telegrams for you (or for . . .).
QRK	What is the readability of my signals (or those of . . .)?	The readability of your signals (or those of . . .) is . . . (1. Unreadable; 2. Readable now and then; 3. Readable, but with difficulty; 4. Readable; 5. Perfectly readable).	QTE	What is my TRUE bearing from you?	Your TRUE bearing from me is . . . degrees (at . . . hours)
QRL	Are you busy?	I am busy (or I am busy with . . .). Please do not interfere.		What is my TRUE bearing from . . . (call sign)?	Your TRUE bearing from . . . (call sign) was . . . degrees (at . . . hours)
QRM	Are you being interfered with?	I am being interfered with.		What is the TRUE bearing of . . . (call sign) from . . . (call sign)?	The TRUE bearing of . . . (call sign) from . . . (call sign) was . . . degrees (at . . . hours).
QRN	Are you troubled by static?	I am troubled by static.	QTH	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]?	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]
QRO	Shall I increase power?	Increase power.		Will you request . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s)?	I have requested . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s).
QRP	Shall I decrease power?	Decrease power.	QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is . . . latitude . . . longitude (or according to any other indication).
QRQ	Shall I send faster?	Send faster (. . . words per minute).	QTI	What is your TRUE track?	My TRUE track is . . . degrees.
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at . . . words per minute.	QTI	What is your speed?	My speed is . . . knots (or kilometres per hour).
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).	QTL	What is your TRUE heading?	My TRUE heading is . . . degrees.
QRT	Shall I stop sending?	Stop sending.	QTN	At what time did you depart from . . . (place)?	I departed from . . . (place) at . . . hours.
QRU	Have you anything for me?	I have nothing for you.	QTO	Have you left dock (or port)?	I have left dock (or port)
QRV	Are you ready?	I am ready.		Are you airborne?	I am airborne.
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s).	Please inform . . . that I am calling him on . . . kc/s (or Mc/s).	QTP	Are you going to enter dock (or port)?	I am going to enter dock (or port)
QRX	When will you call me again?	I will call you again at . . . hours [on . . . kc/s (or Mc/s)].		Are you going to alight (or land)?	I am going to alight (or land).
QRY	What is my turn?	Your turn is Number . . . (Relates to communication.)	QTP	Are you going to enter dock (or port)?	I am going to enter dock (or port)
QRZ	Who is calling me?	You are being called by . . . [on . . . kc/s (or Mc/s)].	QTR	Can you communicate with my station by means of the International Code of Signals?	I am going to communicate with your station by means of the International Code of Signals.
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . (1. Scarcely perceptible; 2. Weak; 3. Fairly good; 4. Good; 5. Very good).	QTS	What is the correct time?	The correct time is . . . hours.
QSB	Are my signals fading?	Your signals are fading.	QTS	Will you send your call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that your frequency may be measured?	I will send my call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that my frequency may be measured.
QSD	Is my keying defective?	Your keying is defective.	QTV	What are the hours during which your station is open?	My station is open from . . . to . . . hours.
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time.	QTV	Shall I stand guard for you on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours).
QSI	What is the charge to be collected per word to . . . including your internal telegraph charge?	The charge to be collected per word to . . . including my internal telegraph charge is . . . francs.	QTX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours).
QSK	Can you hear me between your signals?	I can hear you between my signals.	QUA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).
QSL	Can you acknowledge receipt?	I am acknowledging receipt.	QUB	Can you give me, in the following order, information concerning: visibility, height of clouds, direction and velocity of ground wind at . . . (place of observation)?	Here is the information requested . . .
QSM	Shall I repeat the last telegram which I sent you, or some previous telegram?	Repeat the last telegram which you sent me [or telegram(s) number(s) . . .].	QUC	What is the number (or other indication) of the last message you received from me [or from (call sign)]?	The number (or other indication) of the last message I received from you [or from . . . (call sign)] is . . .
QSN	Did you hear me [or . . . (call sign)] on . . . kc/s (or Mc/s)?	I did hear you [or . . . (call sign) on . . . kc/s (or Mc/s).	QUD	Have you received the urgency signal sent by . . . (call sign of mobile station)?	I have received the urgency signal sent by . . . (call sign of mobile station) at . . . hours.
QSO	Can you communicate with . . . direct or by relay?	I can communicate with . . . direct (or by relay through . . .).	QUF	Have you received the distress signal sent by . . . (call sign of mobile station)?	I have received the distress signal sent by . . . (call sign of mobile station) at . . . hours.
QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.	QUG	Will you be forced to alight (or land)?	I am forced to alight (or land immediately.
QSQ	Have you a doctor on board [or is . . . (name of person) on board]?	I have a doctor on board [or . . . (name of person) is on board].			I shall be forced to alight (or land) at . . . (position or place).
QSU	Shall I send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	Send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).	QUH	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is . . . (units).
QSV	Shall I send a series of V's on this frequency [or . . . kc/s (or Mc/s)]?	Send a series of V's on this frequency [or . . . kc/s (or Mc/s)].			
QSW	Will you send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	I am going to send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).			



# The Radio Amateurs WORLD ATLAS

- + All six Continents of the World!
- + The West Indies-Caribbean area!
- + Polar Projection of the World!
- + Complete Country prefix index!
- + Country prefixes and zone boundaries on each map!
- + 16 pages—4 beautiful colors—8<sup>3</sup>/<sub>4</sub>" x 12" on quality paper stock!

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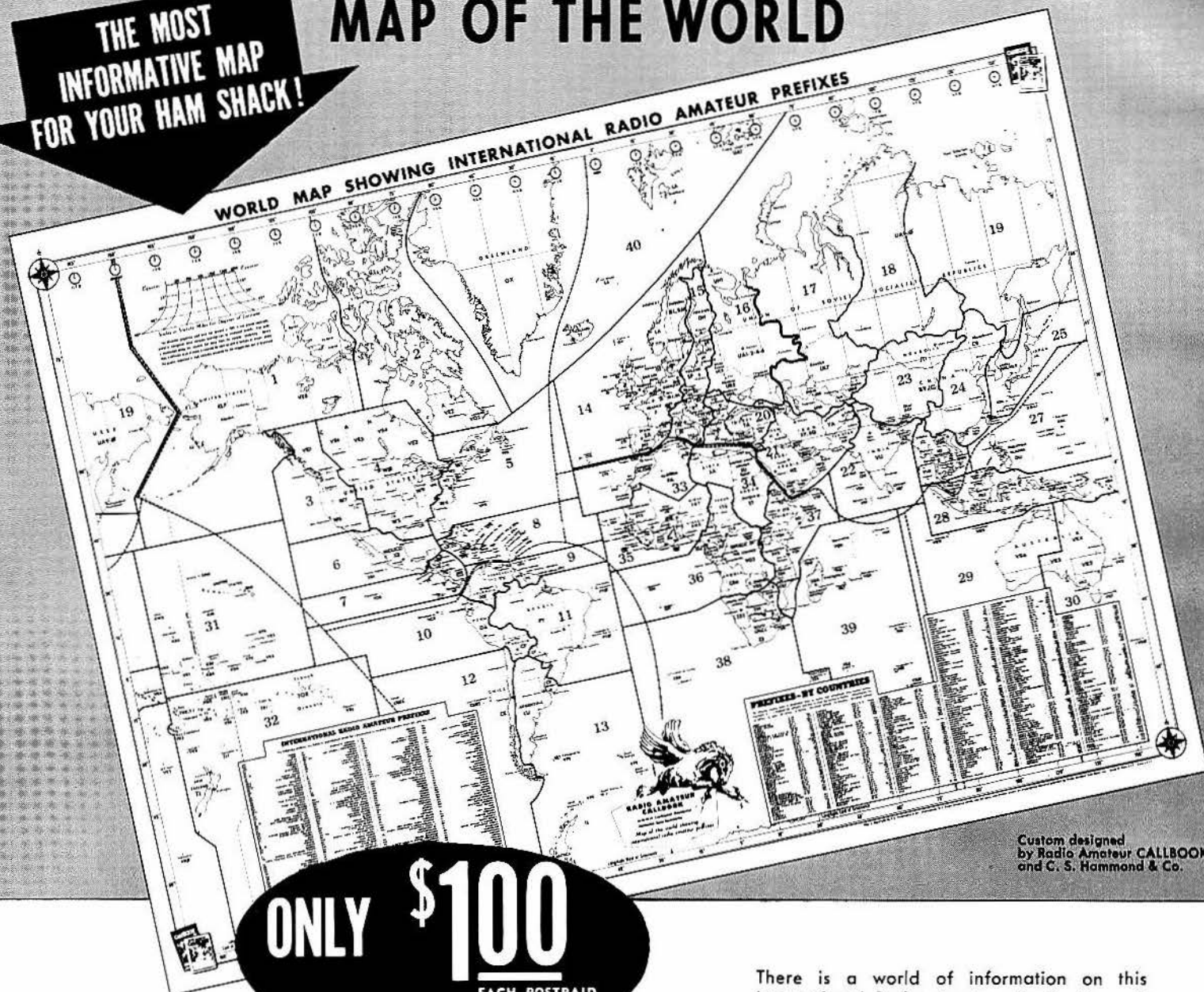
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NATURAL BIRCH base



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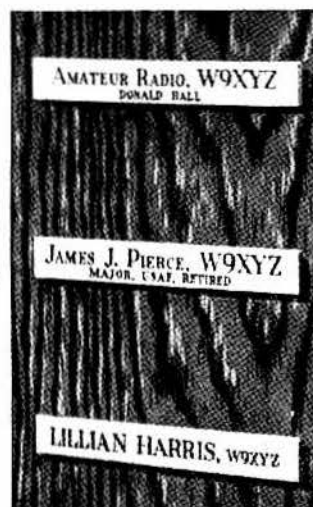
4" long, 1" wide. One or two lines.  
Up to 18 small letters per line.

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Bronze .....	3.95 postpaid

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Show wording exactly as you want it to appear, including numbers, symbols and punctuation.

### WORDING

Check here for:

- ☐ GIFT CARD (No charge)  
Name to appear on gift card \_\_\_\_\_  
Total amount \$ \_\_\_\_\_  
Illinois residents only add 4% retailers' occupational tax \_\_\_\_\_  
Amount enclosed \$ \_\_\_\_\_

KIND OF MARKER Check one	METAL Check one	ARRANGEMENT OF LINES Check one if two-line marker	BASE FINISH Check one if Desk or Exec. Marker
<input type="checkbox"/> Desk <input type="checkbox"/> Exec. without pen <input type="checkbox"/> Exec. with pen <input type="checkbox"/> Door <input type="checkbox"/> MiniMarker	<input type="checkbox"/> Aluminum <input type="checkbox"/> Brass <input type="checkbox"/> Bronze	<input type="checkbox"/> Large letters over small <input type="checkbox"/> Small letters over large <input type="checkbox"/> Both lines small letters (We cannot put two large lines on one plate)	<input type="checkbox"/> Walnut <input type="checkbox"/> Birch <input type="checkbox"/> Ebony

Check correct boxes below

SHIP TO: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY: \_\_\_\_\_ ROUTE OR ZONE: \_\_\_\_\_ STATE: \_\_\_\_\_

**THANK YOU FOR YOUR ORDER**



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(May also be used as a tie-tac.)

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 Item 1-R, Rhodium plated \*F.E.T..... .50  
**\$5.50**



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Item 2-G, 20K gold plated  
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**\$11.00**



## Tie Bar

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 Item 3-R, Rhodium plated Each.....\$6.50  
 \*F.E.T..... .65  
**\$7.15**



## Pin (with safety catch)

Item 6-G, 20K gold plated  
 Item 6-R, Rhodium plated  
 Each.....\$6.50  
 \*F.E.T..... .65  
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## Charm & Bracelet

Item 5-G, 20K gold plated  
 Item 5-R, Rhodium plated  
 Each Set.....\$8.50  
 \*F.E.T..... .85  
**\$9.35**



## Charm ONLY (without bracelet)

Item 7-G, 20K gold plated Each.....\$6.00  
 Item 7-R, Rhodium plated \*F.E.T..... .60  
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Total Amount \$ \_\_\_\_\_

Illinois residents only add 4%  
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Name \_\_\_\_\_

Amount enclosed \$ \_\_\_\_\_

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 Street RFD P.O. Box No.

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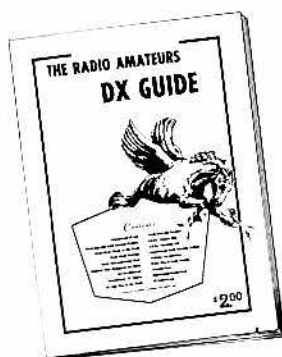
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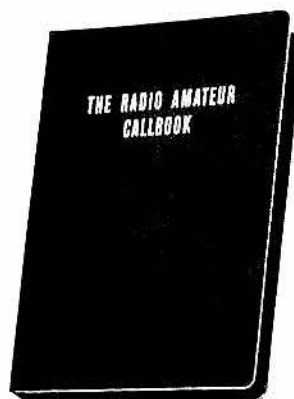
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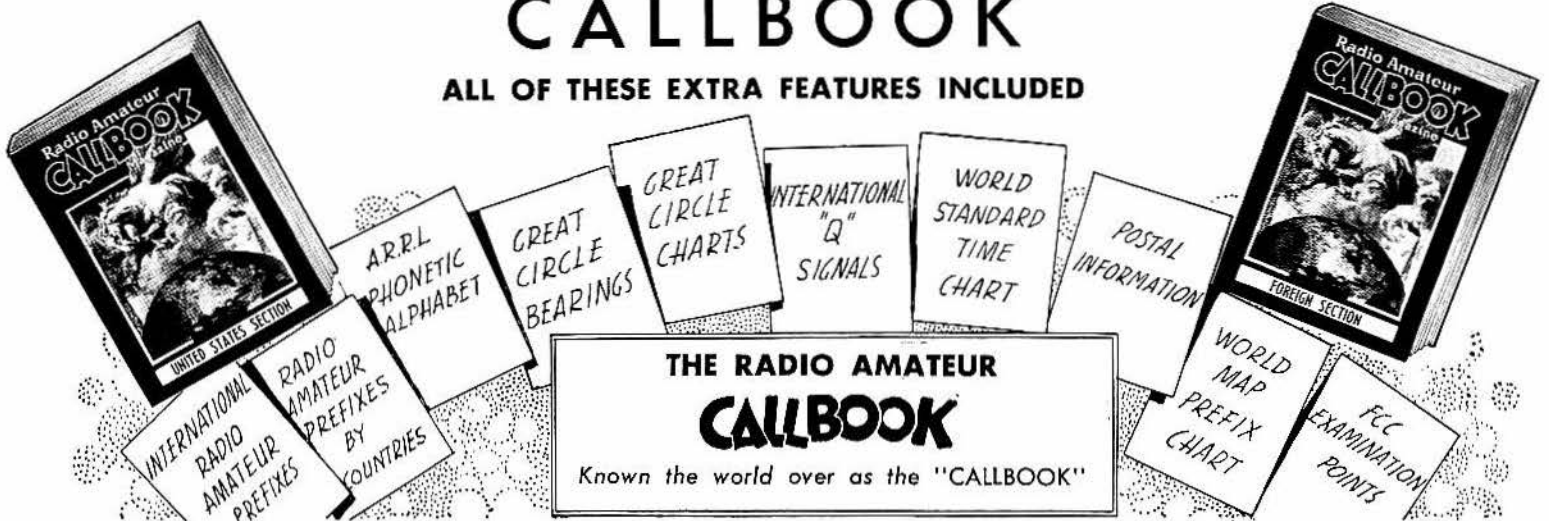
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( ) Summer	( ) Summer	( ) Summer	( ) Summer
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